

DEPARTMENT OF PUBLIC HEALTH AND HUMAN SERVICES

***PUBLIC HEALTH LABORATORY
LABORATORY SERVICES MANUAL***

January 2008

MONTANA PUBLIC HEALTH LABORATORY

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<http://www.dphhs.mt.gov/PHSD/Lab/environ-lab-index.shtml>

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THE ROLE OF THE PUBLIC HEALTH LABORATORY

As part of our national safety network, Public Health Laboratories are on the front line:

- ✓ **Monitoring** the environments in which we live, work, and play
- ✓ **Investigating** and **Containing** emerging infectious diseases and outbreaks
- ✓ **Preventing** disease and disability in vulnerable populations, including women and children
- ✓ **Developing** new methods to combat infectious diseases
- ✓ **Preparing** for and responding to local, state, and national emergencies, such as bioterrorism and natural disasters
- ✓ **Informing** communities and government about threats or risks to health
- ✓ **Formulating** policies that ensure the health and safety of communities

Public Health Laboratories have a unique and important role in protecting the health of our nation. They have a mandate to:

- ✓ **Assess** the health of their communities
- ✓ **Ensure** safe and disease-free communities
- ✓ **Investigate, Identify, Report, and Control** threats to health
- ✓ **Screen** for infectious and chronic diseases to prevent death and disability
- ✓ **Research** and **Develop** new methods to detect chemical and biological threats
- ✓ **Inform** and **Educate** the public and community officials about risks to health
- ✓ **Regulate** private and clinical laboratories to ensure quality laboratory practices
- ✓ **Train** laboratory professionals
- ✓ **Participate** in formulation of policies for the health and safety of our citizens

Public health laboratories are integral to our nation's health system. They are uniquely qualified to support surveillance activities, conduct outbreak investigations, and monitor for new or emerging infectious diseases.

They are among our first line of defenses against bioterrorism. The health and safety of our nation depends on public health laboratories.

Clinical Testing List of Services

For tests not listed, please contact the Laboratory at
800-821-7284 for availability.

Acid Fast Bacilli (see *Mycobacterium sp.*)

Actinomyces sp. Culture Isolation/ Identification (see Bacterial Culture)

Actinomyces sp. Serology

Specimen Requirements: 2 ml. Serum

CPT Code: 86602

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Acylcarnitine Profile by Tandem Mass Spectrometry (see Newborn Screening Panel)

Adenovirus Culture (see Respiratory Virus Culture)

Adenovirus Direct Detection by Real Time PCR

Specimen Requirements: Respiratory specimen in Microtest

CPT Code: 87798

Transport Media. See specific instructions on page 40-41.

Price: \$69.40

Turn Around Time: 1-3 days. Positive results are telephoned to the submitter; all results are faxed to the submitter.

Transport Temperature: 2-8°C

AFB (see *Mycobacterium sp.*)

Amebiasis Detection (see Ova and Parasite Exam)

Amebiasis Serology (see *Entameba histolytica* serology)

Aminoacidopathies by Tandem Mass Spectrometry (see Newborn Screening Panel)

Anthrax (see *Bacillus anthracis*)

Antimicrobial Resistant Bacteria Confirmation

Specimen Requirements: Isolate submitted in Cary-Blair transport or on solid media.

CPT Code: None

Price: No cost

Submit any isolate that demonstrates a resistance pattern that has high epidemiologic significance, such as potential Vancomycin Resistant or Intermediate *Staphylococcus aureus*, Methicillin Resistant *Staphylococcus aureus*, Vancomycin Resistant Enterococci, ESBL producing *Enterobacteriaceae*, and resistant *S. pneumoniae*.

Transport Temperature: Ambient

Turn Around Time: 2-4 days. May be referred to the Centers for Disease Control in Atlanta, Georgia.

Arbovirus Serology, Additional Tests (Western Equine Encephalitis and California Group) by capture ELISA, ELISA

Specimen Requirements: 2 ml. Serum or CSF
Paired acute and convalescent serum recommended. Date of onset must be included on requisition form.

CPT Codes: 86654 (WEE) Price: \$9.40
86651 (CA) Price: \$9.40

Transport Temperature: Ambient

Referred to the Centers for Disease Control, Fort Collins, CO.
Turn Around Time: 4-6 weeks

Argininosuccinic acidemia (See Newborn Screening Panel)

***Aspergillus* sp. Culture Isolation/ Identification (see Fungal Culture)**

***Aspergillus* sp. Serology by Agar Gel Diffusion**

Specimen Requirements: 2 ml. Serum

CPT Code: 86606
Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia
Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Autoclave Monitoring

Specimen Requirements: BT Sure vials containing *Bacillus stearothermophilus* are obtained by contacting the Laboratory. Place the BT Sure vial in center of load to be sterilized, then autoclave using normal procedures.

CPT Code: No code
Price: \$18.80

Transport Temperature: Ambient

Turn Around Time: 2 working days from receipt of specimen.

Babesia Detection

Specimen Requirements: Blood smear, unstained or stained with Wright's or Giemsa.

CPT Code: 87207
Price: \$20.00

Turn Around Time: 1-2 days. Positive smears are referred to the Centers for Disease Control, Atlanta, Georgia for confirmation.

Transport Temperature: Ambient

Babesia Serology by IFA

Specimen Requirements: 2 ml. Serum

CPT Code: 86256
Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia
Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

***Bacillus anthracis* Culture Isolation/ Identification/Rapid Test Methods**

Specimen Requirements: Lesion swab, clinical specimen or culture isolate on solid media or in Cary-Blair transport.

CPT Code: 87077 (culture ID) Price: \$37.50
87798 (PCR) Price: \$69.40

Call laboratory for special instructions regarding environmental samples and rapid testing options.

Transport Temperature: Ambient

A suspect B. anthracis culture requires Infectious Disease packaging (Class 6.2) and trackable shipping. Please notify the PHL by telephone at time of shipment.

Turn Around Time: Cultures will be held for 3 days before reporting as negative. Results are telephoned as soon as possible to the submitter. Rapid test methods are available within 6 hours of specimen receipt.

Bacterial Culture Identification, Aerobic

Specimen Requirements: Send non-fastidious Gram negative rods or Gram positive isolates on solid media or on swab in Cary-Blair transport. Fastidious or slow growing organisms require careful transport on an enriched agar medium. *Please contact the Laboratory prior to submission regarding transport instructions for unusual organisms.*

CPT Code: 87077
Price: \$37.50

Transport Temperature: Ambient

Turn Around Time: Normally 3-14 working days, dependent on the growth rate of the isolate.

Bacterial Culture Identification, Anaerobic

Specimen Requirements: Send isolate in an anaerobic transport system.

CPT Code: 87076
Price: \$40.00

Turn Around Time: 5-7 days, dependent on the growth rate of the isolate.

Transport Temperature: Ambient

***Bartonella* sp. (formerly *Rochalimaea* sp.) Culture Isolation/ Identification**

Specimen Requirements: Collect blood in EDTA tube; freeze blood or tissue prior to transport. Send specimen on dry ice.

CPT Code: 87081
Price: \$30.00

Turn Around Time: Negative cultures are monitored for 14 days; positive culture results are telephoned to the submitter.

Transport Temperature: Ambient

***Bartonella* sp. (formerly *Rochalimaea* sp.) Serology by IFA**

Specimen Requirements: 2 ml. Serum, plus completed cat scratch fever disease history form. Contact the Laboratory to obtain a copy of the form, and for more information.

CPT Code: 86256
Price: \$9.40

Transport Temperature: Ambient

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 4-6 weeks

Biotinidase (see Newborn Screening Panel)

***Blastomyces* sp. Culture Isolation/ Identification (see Fungal Culture)**

***Blastomyces* sp. Serology (see Fungal Serology)**

Blood Borne Pathogen Exposure/Source Patient (Hepatitis B Surface Antigen, HIV, Hepatitis C Virus) by EIA

Specimen Requirements: 2 ml. Serum

CPT Codes: 87340 (HbsAg) Price: \$19.80
86703 (HIV) Price: \$19.25
86803 (HCV) Price: \$33.20
Total Price: \$72.25

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter. *These tests may be ordered as a panel, but are billed individually.*

Transport Temperature: Ambient

Blood Borne Pathogen Exposure - Exposed Worker (Hepatitis B Surface Antibody, HIV, Hepatitis C Virus) by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86706 (HBsAb) Price: \$22.30
86703 (HIV) Price: \$19.25
86803 (HCV) Price: \$33.20
Total Price: \$74.75

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter. *These tests may be ordered as a panel, but are billed individually.*

Transport Temperature: Ambient

Blood Lead by Anodic Stripping Voltometry

Specimen Requirements: 2 ml. Venous or 0.3 ml. Capillary whole blood, EDTA (purple top). Adult and child specimen collection kits are available through the Laboratory. The Laboratory is certified to test for both child and adult lead levels. See pages 44-45 for collection instructions.

CPT Code: 83655

Price: \$18.75

Transport Temperature: Ambient

Turn Around Time: Routinely batch tested at least two times per week. Elevated results are telephoned to the submitter.

***Bordetella pertussis* Culture Isolation/Identification**

Specimen Requirements: Nasopharyngeal (NP) swab in Regan-Lowe transport. Remove the transport medium from the refrigerator and warm to room temperature. Collect specimen. Insert the swab into the transport, cut or break the end off the swab so that the cap can be tightened securely. Put the transport in the zip-lock bag provided. Do not refrigerate transport medium after it has been inoculated. Regan-Lowe is the only transport media acceptable for pertussis cultures.

CPT Code: 87081

Price: \$30.00

Transport Temperature: Ambient

Turn Around Time: Negative cultures are monitored for 7 days; positive culture results may take 3-7 days and are telephoned to the submitter.

***Bordetella pertussis/Bordetella parapertussis* Direct Detection by Real Time PCR**

Specimen Requirements: Nasal washing or nasopharyngeal swab in a sterile container. Do not submit a throat or nares specimen. See specific instructions on page 40-41.

CPT Code: 83891 (Extraction)
and 87798 X 2 (Amp Probe)

Price: \$75.50

Turn Around Time: 1-2 days. All results are faxed to the submitter. Positive results are telephoned to the submitter.

Nasal Wash Transport Temperature: 2-8°C

NP Swab Transport Temperature: Ambient

NOTE: PCR testing should be performed only on symptomatic patients; a positive PCR in an asymptomatic patient does not meet the standard CDC case definition and cannot be considered a case of pertussis. PCR testing may be able to detect *B. pertussis* 3 - 4 weeks post onset, and after antibiotic therapy has been initiated.

Botulism (see *Clostridium botulinum*)

***Borrelia burgdorferi* Culture**

Specimen Requirements: Skin punch biopsy, synovial fluid, CSF. Contact the Laboratory prior to collection for special instructions and transport media.

CPT Code: 87081

Price: \$9.40

Transport Temperature: Ambient

Referred to the Centers for Disease Control, Fort Collins, Colorado

***Borrelia burgdorferi* Serology by EIA (reflexed to Western Blot confirmatory testing)**

Specimen Requirements: 2 ml. Serum and a completed Lyme Disease report form (see page 52). Date of onset information must be included.

CPT Code: 86618 (Screen)

Price: \$9.40

Transport Temperature: Ambient

Referred to the Centers for Disease Control, Fort Collins, Colorado

Turn Around Time: 4-6 weeks

***Borrelia hermsii* Serology (Tick Borne Relapsing Fever) by EIA**

Specimen Requirements: 2 ml. Serum

CPT Code: 86619

Paired acute and convalescent serum recommended. Date of onset information must be included on requisition form.

Price: \$9.40

Transport Temperature: Ambient

Referred to the Centers for Disease Control, Fort Collins, Colorado

Turn Around Time: 4-6 weeks

***Brucella* sp. Culture Isolation/ Identification/Rapid Test Methods**

Specimen Requirements: Blood, bone marrow, or tissue submitted in sterile saline or broth. Submit suspect culture isolates on solid medium. *Call the laboratory for special instructions regarding environmental samples and rapid testing options.*

CPT Code: 87081 (culture ID) Price: \$30.00
87798 (PCR) Price: \$69.40

Transport Temperature: Ambient

A suspect Brucella sp. culture requires Infectious Disease packaging (Class 6.2) and trackable shipping. Please notify the PHL by telephone at time of shipment.

Turn Around Time: Cultures will be held for 2 weeks before reporting as negative. Results are telephoned as soon as possible to the submitter. Rapid test methods are available within 6 hours of specimen receipt.

Brucella Serology by Bacterial Agglutination

Specimen Requirements: 2 ml. Serum

CPT Codes: 86622 (Brucella) Price: \$17.20

Paired acute and convalescent serum recommended.

86668 (Tularemia) Price: \$17.20

Total Price: \$34.40

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: Tularemia serology will be automatically performed on all requests for Brucella serology due to antigen cross reactivity.

***Burkholderia mallei* and *B. pseudomallei* Culture Isolation/ Identification/Rapid Test Methods**

Specimen Requirements: Clinical specimen in sterile container or isolate submitted in Cary-Blair transport or on solid medium. *Call laboratory for special instructions regarding environmental samples and rapid testing options.*

CPT Code: 87081 (culture ID) Price: \$30.00
87798(PCR) Price: \$69.40

Transport Temperature: 2-8°C

A suspect Burkholderia mallei or B. pseudomallei culture requires Infectious Disease packaging (Class 6.2) and trackable shipping. Please notify the PHL at time of shipment.

Turn Around Time: Cultures will be held for 2 weeks before reporting as negative. Results are telephoned as soon as possible to the submitter. Rapid test methods are available within 6 hours of specimen

***Campylobacter* sp. Culture Isolation/Identification**

Specimen Requirements: Stool in submitted in Cary-Blair transport or culture isolate on solid media.

CPT Code: 87046
Price: \$30.00

Turn Around Time: 2 to 4 days. Positive results are telephoned to the submitter.

Transport Temperature: 2-8°C

Congenital Adrenal Hyperplasia (CAH) (see Newborn Screening Panel)

***Candida albicans* Culture Isolation/Identification (see Yeast Culture)**

Cat Scratch Fever (see *Bartonella* sp.)

Central Nervous System Virus Culture (see CNS Virus Culture)

CH, Congenital Hypothyroidism (see Newborn Screening Panel)

Chancroid (see *Haemophilus ducreyi*)

***Chlamydia* sp. Culture Isolation/Identification**

Specimen Requirements: Specimen in Microtest Transport Media received within 24 hours of collection. See specific instructions on page 38.

CPT Code: 87110

Price: \$35.35

Turn Around Time: 3 to 6 days. Positive test results are telephoned to the submitter.

Transport Temperature: 2-8°C

***Chlamydia trachomatis* Direct Detection** by Nucleic Acid Amplification

Specimen Requirements: Endocervical or male urethral swab in APTIMA Uni-Sex Swab Specimen Collection Tube, **or** urine in APTIMA Urine Specimen Collection Tube. See specific instructions on page 37.

CPT Code: 87491

Price: \$40.50

Transport Temperature: 2-30°C

Turn Around Time: Routinely tested each working day. Positive results are telephoned to the submitter.

NOTE: Can be run in tandem with *Neisseria gonorrhoeae* Direct Detection by APTIMA Amplification (see Combination Amplification Test below).

***Chlamydia trachomatis/Neisseria gonorrhoeae* Direct Detection** by Nucleic Acid Amplification (Combination Amplification Test)

Specimen Requirements: Endocervical or male urethral swab in APTIMA Uni-Sex Swab Specimen Collection Tube, **or** urine in APTIMA Urine Specimen Collection Tube. See specific instructions on page 37.

CPT Codes: 87491(Chlam) Price: \$40.50

87591(GC) Price: \$40.50

Total Price: \$81.00

Transport Temperature: 2-30°C

Turn Around Time: Routinely tested each working day. Positive results are telephoned to the submitter. *These tests can be ordered as a panel, but will be billed individually.*

Cholera (see Vibrio Culture Isolation/ Identification)

Citrullinemia (See Newborn Screening Panel)

***Clostridium botulinum* Bacterial Identification, Toxin, and Serology Testing**

Consultation with Laboratory required prior to referral.

CPT Code: None

Price: No cost*

Specimen Requirements: Suspect food, 10 ml. Serum, and 25 gm. Stool. Call the Laboratory for consultation on sending specimens and to make arrangements for receiving antitoxin. An epidemiologic consultation is also required.

Transport Temperature: Contact Laboratory

Food testing performed at MTPHL.

Human testing referred to the Utah State Public Health Laboratory in Salt Lake City, UT.

Turn Around Time: Preliminary results in 2 – 4 days.

***Clostridium difficile* Toxin A & B Test by EIA**

Specimen Requirements: Submit at least one milliliter of raw stool in a sterile container. Freeze the specimen.

CPT Code: 87324
Price: \$24.60

Turn Around Time: 1 - 2 days. Positive test results are telephoned to the submitter.

Transport Temperature: 2-8°C

***Clostridium sp. (except C. botulinum)* Culture Isolation/ Identification (see Bacterial Culture, Anaerobic)**

CMV (see Cytomegalovirus)

(CNS) Central Nervous System Virus Culture Isolation/Identification

Specimen Requirements: CSF or Central Nervous System specimen in Microtest Transport Media, received within 48 hours of collection. See specific instructions on page 39.

CPT Code: 87252
Price: \$35.35

Transport Temperature: 2-8°C

Turn Around Time: Positive results are telephoned to the submitter. Cultures are monitored for 2 weeks prior to a negative report.

NOTE: CNS specimens for virus isolation are screened for the presence of the following commonly isolated viruses: Herpes Simplex Virus, Enterovirus (including Echovirus and Coxsackie A & B) and Adenovirus

***Coccidioidomyces sp.* Culture Isolation/ Identification (see Fungal Culture)**

Coccidioidomycosis Serology (see Fungal Serology)

Colorado Tick Fever Virus Serology, IgG by Indirect Immunofluorescence

Specimen Requirements: 2 ml. Serum
Paired acute and convalescent serum recommended.

CPT Code: 86790 (CTFV) Price: \$19.10
86757 (RMSF) Price: \$19.10
Total Price: \$38.20

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: Rocky Mountain Spotted Fever testing will automatically be performed on all requests for Colorado Tick Fever.

Congenital Adrenal Hyperplasia (see Newborn Screening Panel)

Congenital Hypothyroidism (see Newborn Screening Panel)

***Corynebacterium diphtheriae* Culture Isolation/ Identification**

Specimen Requirements: Throat swab in silica gel or Cary Blair transport medium, or isolate in Cary Blair transport or solid media.

CPT Code: 87081
Price: \$30.00

Turn Around Time: 4 to 7 days. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

***Corynebacterium sp., not C. diphtheriae* Culture Isolation/ Identification (see Bacterial Culture, Aerobic)**

***Coxiella brunetii* Serology (see Q fever Serology)**

***Cryptococcus sp.* Culture Isolation/ Identification (see Yeast Culture)**

Cryptosporidium / Cyclospora Detection by Fluorescent Stain

Specimen Requirements: Stool in formalin

CPT Code: 87206 Price: \$26.55

Turn Around Time: Performed each working day. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

Culture for Storage

Specimen Requirements: Isolate submitted in Cary-Blair transport or on solid media.

CPT Code: None
Price: No cost

Submit organisms that are of epidemiologic interest and need to be stored for molecular comparison to other strains. Laboratories are encouraged to submit organisms which may be part of an outbreak or which demonstrate a significant antibiotic resistance, i.e. *Salmonella sp.*, *E. coli O157*, Toxigenic *E. coli*, *Shigella sp.*, *N. gonorrhoeae*, resistant *Streptococcus pneumoniae*, MRSA, VRE, ESBL, potential VISA or VRSA.

Transport Temperature: Ambient

Cystic Fibrosis Screen Detection of IRT (Immunoreactive Trypsinogen) by Fluorometry (see Newborn Screening Panel)

Cysticercosis (*Taenia sp.*) Detection

Specimen Requirements: Stained tissue section

CPT Code: 87207
Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia
Turn Around Time: 2-4 weeks

Transport Temperature: Ambient

Cysticercosis (*Taenia sp.*) Serology by Immunoblot

Specimen Requirements: 2 ml. Serum

CPT Code: 84182
Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia
Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Cytomegalovirus Culture Isolation/Identification (Traditional Cell Culture and Rapid Spun Vial Technology)

Specimen Requirements: Urine, BAL, or Bronchial Washings in Microtest Transport Media, Heparinized Blood, Biopsies, received within 48 hours of collection. See specific instructions on page 39.

CPT Code (Culture): 87252
Price: \$35.35

Transport Temperature: 2-8°C

Turn Around Time: Positive results are telephoned to the submitter. Cultures are monitored for 1 month before reporting as negative. Cultures of tissue samples are monitored for 2 months prior to a negative report.

Cytomegalovirus IgG Serology by EIA

Specimen Requirements: 2 ml. Serum
Screen or paired acute and convalescent specimens

CPT Code: 86644
Price: \$19.10

Turn Around Time: Routinely batch tested once per week. Significant results are telephoned to the submitter.

Transport Temperature: Ambient

Cytomegalovirus IgM Serology by Capture EIA

Specimen Requirements: 2 ml. Serum
Screen or paired acute and convalescent specimens

CPT Code: 86645
Price: \$34.20

Turn Around Time: Testing performed each working day. Significant results are telephoned to the submitter.

Transport Temperature: Ambient

Dengue Fever Serology by ELISA

Specimen Requirements: 2 ml. Serum

CPT Code: 86790

Price: \$9.40

Referred to the Centers for Disease Control, San Juan, Puerto Rico

Turn Around Time: 4-6 weeks

Transport Temperature: Ambient

Dermatophytes Culture Isolation/ Identification (see Fungal Culture)

Diphtheria (see *Corynebacterium diphtheriae*)

DNA Fingerprinting (see Pulsed Field Gel Electrophoresis)

Echinococcosis Detection

Specimen Requirements: Stained tissue section

CPT Code: 87207

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 1-3 weeks

Transport Temperature: Ambient

Echinococcosis Serology by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 84182

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 2-4 weeks

Transport Temperature: Ambient

EHEC, Enterohemorrhagic *E. coli* (See *Escherichia coli* Shiga-Like Toxin Assay)

***Ehrlichia* sp. Serology by Indirect Immunofluorescence**

Specimen Requirements: 2 ml. Serum

CPT Code: 86682

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-4 weeks

Transport Temperature: Ambient

***Entameba histolytica* Serology by EIA**

Specimen Requirements: 2 ml. Serum Include documentation of negative stool examinations for *E. histolytica*.

CPT Code: 86753

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Enteric Panel Culture Isolation/ Identification (includes detection of *Salmonella*, *Shigella*, *Campylobacter*, and *E. coli* O157)

Specimen Requirements: Stool in Cary-Blair transport, or other commercial enteric transport media. Collect stool directly from patient into a clean specimen container. Do not collect from toilet bowl or use stool contaminated with urine. Use a sterile swab to collect a portion of the stool (collect from bloody or mucous-containing areas if present) and insert swab to the lower part of a Cary-Blair transport tube and break or cut the swab stick. A rectal swab is also acceptable if there is evidence of fecal staining on the swab. Cary-Blair transport tubes are supplied upon request.

CPT Codes: 87045 (Salm & Shig) Price:

\$35.00

87046 (Campy & *E. coli*) Price: \$35.00

Total Price: \$70.00

Transport Temperature: 2-8°C

Turn Around Time: 2 to 4 days. Positive test results are telephoned to the submitter.

Enteric Culture Surveillance

Specimen Requirements: All isolates of toxin producing *Escherichia coli* (including serotype O157:H7), *Salmonella* spp., *Shigella* spp., *Vibrio*, and *Listeria* should be referred for surveillance purposes.

CPT Code: none

Price: none

Transport Temperature: Ambient

PFGE testing (DNA fingerprinting) will be performed to determine strain-relatedness; these results are compared to other strain patterns in Montana and across the nation using the CDC PulseNet database. Results are communicated to the DPHHS Epidemiology staff for follow up.

Turn Around Time: Routinely tested each week.

Enterovirus Culture (see Enteric Virus Culture)

Enteric Virus Culture Isolation/Identification

Specimen Requirements: Stool or Rectal Swab in Microtest Transport Media, received within 48 hours of collection. See specific instructions on page 39.

CPT Code: 87252 (Culture) Price: \$35.35

87140 (Identification) Price: \$11.05

Total: \$46.40

Turn Around Time: Positive results are telephoned to the submitter. Cultures are monitored for 2 weeks prior to a negative report.

Transport Temperature: 2-8°C

NOTE: Enteric specimens for virus isolation are screened for the following commonly isolated viruses: Enterovirus (including Echovirus and Coxsackie A & B), Adenovirus, Herpes Simplex Virus

Enterovirus (Pan-Enterovirus) Detection by Nucleic Acid Amplification Testing

Specimen Requirements: Nasal washings, CSF, or stool in sterile transport container, or CSF, throat swab or rectal swab in Microtest Transport Medium. See specific instructions on page 40-41.

CPT Code: 83891 (Extraction)

and 87798 (Amp Probe)

Price: \$75.50

Turn Around Time: 1-3 days. Positive results are telephoned to the submitter. All results are faxed to the submitter.

Transport Temperature: 2-8°C

ESBL (see Antimicrobial Resistant Bacteria Confirmation)

Escherichia coli O157 Culture Isolation/Identification

Specimen Requirements: Stool specimen in Cary-Blair transport, or other commercial enteric transport media, or culture isolate submitted in Cary Blair transport or on solid media.

CPT Code: 87081

Price: \$30.00

Transport Temperature: 2-8°C

For public health surveillance, please submit all isolates of E. coli O157 to the Montana Public Health Laboratory. See Enteric Culture Surveillance.

Turn Around Time: 2 - 4 days. Positive results are telephoned to the submitter.

Escherichia coli Shiga-Like Toxin Assay (Enterohemorrhagic *E. coli*, EHEC or STEC) by EIA

Specimen Requirements: Stool specimen in Cary-Blair transport, or other commercial enteric transport media, or *Escherichia coli* isolate submitted in Cary Blair transport or on solid media.

CPT Code: 87449

Price: \$24.60

Transport Temperature: 2-8°C

Turn Around Time: 1 to 4 days. Positive results are telephoned to the submitter. Stools with positive toxin tests will be further cultured to isolate and identify the toxin-producing organism.

Exanthem Serology Panel, IgG only (Rubeola, Rubella, Herpes Simplex Virus, Varicella Zoster Virus, Colorado Tick Fever Virus (during tick season), and Rocky Mountain Spotted Fever (during tick season) by EIA, IFA

Specimen Requirements: 2 ml. Serum
Paired acute and convalescent serum recommended. Date on onset of rash must be included on requisition form.

Turn Around Time: Routinely batch tested once per week.
Significant results are telephoned to the submitter. *These tests may be ordered as a panel, but will be billed individually.*

CPT Codes: 86765 (Meas) Price: \$19.10
86762 (Rub) Price: \$19.10
86695 (HSV1) Price: \$19.10
86696 (HSV2) Price: \$19.10
86787 (VZV) Price: \$19.10
86790 (CTFV) Price: \$19.10
86757 (RMSF) Price: \$19.10
Total Price: \$133.70

NOTE: Tick season is normally March through September.

Transport Temperature: Ambient

Exanthem Panel, IgG + IgM (Rubeola IgG + IgM, Rubella IgG + IgM, Herpes Simplex Virus, Varicella (Herpes) Zoster Virus, Colorado Tick Fever Virus and Rocky Mountain Spotted Fever (during tick season) by EIA, IFA

Specimen Requirements: 2 ml. Serum
Paired acute and convalescent serum recommended.
Date on onset of rash must be included on requisition form.

Turn Around Time: Routinely batch tested once per week. IgM testing performed each working day, as needed. Significant results are telephoned to the submitter. *These tests may be ordered as a panel, but will be billed individually.*

CPT Codes: 86765 (Meas IgG) Price: \$19.10
86765 (Meas IgM) Price: \$19.10
86762 (Rub IgG) Price: \$19.10
86762 (Rub IGM) Price: \$19.10
86695 (HSV1) Price: \$19.10
86696 (HSV2) Price: \$19.10
86787 (VZV) Price: \$19.10
86790 (CTFV) Price: \$19.10
86757 (RMSF) Price: \$19.10
Total Price: \$171.90

NOTE: Tick season is normally March through September.

Transport Temperature: Ambient

Fatty Acid Oxidation /Organic Acidemias (see Newborn Screening Panel)

Fluorescent Treponemal Antibody (FTA-ABS) by Indirect Immunofluorescence

Specimen Requirements: 2 ml. Serum

CPT Code: 86781
Price: \$30.90

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

***Francisella tularensis* Culture Isolation/ Identification/Rapid Test Methods**

Specimen Requirements: Clinical specimen in sterile container or pure culture submitted in Carey-Blair transport or on solid medium.
Call laboratory for special instructions regarding environmental samples and rapid testing options.

CPT Code: 87081 (culture ID) Price: \$30.00
87798 (PCR): \$69.40

Transport Temperature: 2-8°C

A suspect F. tularensis culture requires Infectious Disease packaging (Class 6.2) and trackable shipping. Please notify the PHL at time of shipment.

Turn Around Time: Cultures will be held for 2 weeks before reporting as negative. Results are telephoned as soon as possible to the submitter. Rapid test methods are available within 6 hours of specimen receipt.

***Francisella tularensis* Serology** by Bacterial Agglutination

Specimen Requirements: 2 ml. Serum
Paired acute and convalescent specimens recommended.

CPT Code (Tule): 86668 Price: \$17.20
(Brucella): 86622 Price: \$17.20

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: Brucella serology testing will be automatically performed on all requests for Tularemia serology due to antigen cross reactivity.

FTA-ABS (see Fluorescent Treponemal Antibody)

Fungal Culture Isolation/Identification

Specimen Requirements: Send original specimens in a sterile container.
Send cutaneous specimens dry. Send fungal isolates on an agar slant. See specific instructions on page 36.

CPT Codes: 87101 (skin)
87103 (blood)
87102 (other)
87106 (definitive ID)

Turn Around Time: Primary specimen cultures are monitored for 4 weeks prior to a negative report.

Price: \$50.00 each

Transport Temperature: Ambient

Fungal Serology (Histoplasmosis, Coccidioidomycosis, Blastomycosis) by CF & Agar Gel

Specimen Requirements: 2 ml. Serum

CPT Code: 86698 (Histo)
86612 (Blasto)
86635 (Cocci)
Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia
Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Galactosemia (see Newborn Screening Panel)

***Gardnerella vaginalis* Culture Isolation/ Identification** (see Bacterial Culture, Aerobic)

Giardia Detection (see Ova and Parasite Exam)

Gonococcal Infections (see *Neisseria gonorrhoeae*)

Group A Streptococcus Screen (see Streptococcus Screen for Group A)

***Haemophilus ducreyi* Culture Isolation/ Identification**

Specimen Requirements: Saline or broth moistened swab from the base and undetermined margins of the chancroid lesion, smeared and sent on chocolate plate or placed in Cary-Blair transport.

CPT Code: 87081
Price: \$30.00

Turn Around Time: Negative cultures are monitored for 14 days; positive culture results are telephoned to the submitter.

Transport Temperature: Ambient

***Haemophilus influenzae* Culture Isolation/ Identification**

Specimen Requirements: Primary specimen or isolate on MTM or chocolate media.

CPT Code: 87077

Price: \$37.50

Turn Around Time: 2 - 4 days. Positive *H. influenzae* results from sterile sites are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: Serogrouping is routinely performed on *H. influenzae* isolates from sterile body sites such as blood or cerebral spinal fluid. Please submit all *H. influenzae* isolates from sterile body sites to PHL for serogrouping and storage for epidemiologic purposes.

***Haemophilus sp.* Culture Isolation/ Identification (see Bacterial Culture, Aerobic)**

Hantavirus (Sin Nombre Virus) IgG + IgM Serology by EIA, capture EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86790 x 2 Price: \$42.80

Total Price: \$85.60

Turn Around Time: Routinely batch tested once per week. Testing is available each working day, or on weekends and holidays as needed. **Call ahead to notify the Laboratory and to make arrangements.** Positive and STAT results are telephoned to the submitter.

Transport Temperature: Ambient

To qualify for *STAT* testing, all of the following criteria must be met:

1. The patient is hospitalized with an acute respiratory illness, typical of hantavirus pulmonary syndrome (HPS).
2. The patient is critically ill.
3. The patient does not have any relevant underlying medical condition that could account for the symptoms (COPD, malignancy, immunosuppression, diabetes)
4. The onset of illness (date when prodromal symptoms such as low grade fever and myalgia were noted) is 3 or more days prior to serum sample collection. IgM antibody to SNV is usually not detectable until the patient develops shortness of breath.

HCV (See Hepatitis C Screen)

Hemoglobinopathy Screen by Isoelectric Focusing (see Newborn Screening Panel)

Hepatitis, Acute Panel by EIA (Hepatitis A IgM Antibody, Hepatitis B Surface Antigen, Hepatitis B Core IgM Antibody, Hepatitis C Antibody)

Specimen Requirements: 2 ml. Serum

CPT Code: 80074

Price: \$110.90

Turn Around Time: Testing is routinely batch tested once per week, but may be available each working day as needed. Call ahead to notify the Laboratory and to make arrangements if immediate testing is needed. Positive and STAT results are telephoned to the submitter.

Transport Temperature: Ambient

Hepatitis A IgM Antibody by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86709

Price: \$28.95

Turn Around Time: Testing is routinely batch tested once per week, but may be available each working day as needed. Call ahead to notify the Laboratory and to make arrangements if immediate testing is needed. Positive and STAT results are telephoned to the

Transport Temperature: Ambient

Hepatitis B Core IgM Antibody by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86705

Price: \$28.95

Turn Around Time: Testing is routinely batch tested once per week, but may be available each working day as needed. Call ahead to notify the Laboratory and to make arrangements if immediate testing is needed. Positive and STAT results are telephoned to the

Transport Temperature: Ambient

Hepatitis B Core Total Antibody by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86704

Price: \$33.20

Turn Around Time: Testing is routinely batch tested once per week. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: If this test is the only Hepatitis B serologic marker ordered, positive results will automatically be reflexed to a HBsAg and HBsAb test.

Hepatitis B Surface Antibody by EIA (Quantitation)

Specimen Requirements: 2 ml. Serum

CPT Code: 86706

Price: \$22.30

Turn Around Time: Testing is routinely batch tested once per week.

Transport Temperature: Ambient

Hepatitis B Surface Antigen by EIA with reflex confirmation

Specimen Requirements: 2 ml. Serum

CPT Code: 87340

Price: \$19.80

Turn Around Time: Routinely batch tested once per week. Call ahead to notify the Laboratory and to make arrangements if immediate testing is needed. Positive and STAT results are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: Confirmatory Neutralization testing will be automatically performed on all repeat reactive screens.

Hepatitis C (HCV) Antibody Screen by EIA with reflex Confirmation

Specimen Requirements: 2 ml. Serum

CPT Code (screen): 86803

Price: \$33.20

Turn Around Time: EIA screens routinely batch tested twice per week. Confirmatory testing is performed as needed with submitter consultation. Positive results are telephoned to the submitter.

For RIBA confirmation

See specific listing below

Transport Temperature: Ambient

NOTE: Reflex confirmatory testing (RIBA or HCV RNA) is performed on all repeat reactive EIA screens with Signal/CutOff (S/CO) ratio <3.8. Confirmatory testing is not necessary on specimens with S/CO ratios of 3.8 or greater as the confirmation rate on these specimens is >95%.

For HCV RNA confirmation

See specific listing below

Transport Temperature: 2-8°C

Hepatitis C (HCV) Genotyping

Specimen Requirements: 2 ml. Serum. Hepatitis C RNA testing must be performed prior to genotyping.

CPT Code: 87902

Price: \$75.00

Referred to the Contra-Costa County Public Health Laboratory, Martinez, California

Turn Around Time: 2 to 4 weeks

Transport Temperature: 2-8°C

Hepatitis C (HCV) RNA Testing, Quantitative, by Reverse Transcriptase-PCR

Specimen Requirements: 2 ml Serum. Serum must be separated from the red cells within 6 hours of collection. Transport in a cold condition using ice packs in an insulated container. Specimens must be received within 72 hours of collection.

CPT Code: 87522

Price: \$109.05

Transport Temperature: 2-8°C

Turn Around Time: Routinely batch tested every two weeks.

Hepatitis C (HCV) Antibody Confirmation, by RIBA

This test may be done in instances when a confirmatory specimen for HCV RNA Quantitative PCR testing cannot be obtained or to confirm the presence of HCV antibody only.

CPT Code: 86804

Price: \$80.00

Transport Temperature: Ambient

Specimen Requirements: 2 ml Serum.

Referred to Commercial Reference Lab

Turn Around Time: 3-6 weeks.

Herpes Simplex Virus, Type 1 and 2 Culture Isolation/Identification

Specimen Requirements: Specimen in Microtest Transport Media, received within 48 hours of collection. See specific instructions on page 39.

CPT Code: (Culture) 87252 Price: \$35.35

(Identification) 87140 Price: \$11.05

Transport Temperature: 2-8°C

Turn Around Time: Positive results are telephoned to the submitter; cultures are monitored for 7 days prior to a negative report.

Herpes Simplex Virus, Type 1 and 2, IgG Serology by type specific EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86695 (HSV 1) Price: \$19.10

Screen or paired acute and convalescent specimens

86696 (HSV 2) Price: \$19.10

Total Price: \$38.20

Turn Around Time: Routinely batch tested once per week.

Significant results are telephoned to the submitter.

Transport Temperature: Ambient

Herpes Simplex Virus, Type 1 and 2, Direct Detection by Real Time PCR

Specimen Requirements: CSF, Cervical Swab or Lesion swab in Microtest Transport Media. See special instructions on page 40-41.

CPT Code: 83891 (Extraction)

and 87529 (Amp Probe)

Price: \$75.50

Turn Around Time: 1 – 3 days. Results are telephoned to the

Transport Temperature: 2-8°C

Herpes Zoster Virus Culture (See Varicella Zoster Virus Culture)

Herpes Zoster Virus IgG Serology by EIA (See Varicella Zoster Virus Serology)

Histoplasma Culture Isolation/ Identification (see Fungal Culture)

Histoplasma Serology (see Fungal Serology)

HIV – 1 / 2 Antibody Plus O (EIA screen with reflex Western Blot Confirmation)

Specimen Requirements: 2 ml. Serum

CPT Code: 86703 (Screen) Price: \$19.25

86689 (Blot) Price: \$111.00

Turn Around Time: EIA screens routinely tested several days each week; Western Blots performed as needed. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: Reflex confirmatory Western Blot testing is performed on all repeat reactive EIA screens.

HIV - 1 Antigen by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 87390

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 4-6 weeks

Transport Temperature: Ambient

Homocystinuria by Tandem Mass Spectroscopy (see Newborn Screening Panel)

Influenza A and B Culture (See Respiratory Virus Culture)

Influenza A Virus Direct Detection by Real Time PCR

Specimen Requirements: Respiratory specimen in Microtest

CPT Code: 87798

Transport Media. See specific instructions on page 40-41.

Price: \$69.40

This test detects all subtypes of Influenza; both seasonal and H5 Avian Influenza.

Transport Temperature: 2-8°C

Turn Around Time: 1-3 days. Results are telephoned to the submitter.

Influenza B Virus Direct Detection by Real Time PCR

Specimen Requirements: Respiratory specimen in Microtest

CPT Code: 87798

Transport Media. See specific instructions on page 40-41.

Price: \$69.40

Turn Around Time: 1-3 days. Results are telephoned to the submitter.

Transport Temperature: 2-8°C

Influenza A Isolate Subtyping by IFA or Real Time PCR

Specimen Requirements: Influenza A isolate in cell culture fluid or nucleic acid from a PCR specimen. Reflex testing is performed on all Influenza A positive specimens.

Price: No cost*

Transport Temperature: 2-8°C

*Testing is performed at no cost for epidemiological purposes.

Turn Around Time: Subtyping is performed each working day. Results are telephoned to the submitter.

Influenza Isolate Characterization

Specimen Requirements: Influenza A isolate in cell culture fluid.

Price: No cost*

The Montana Public Health Laboratory routinely selects significant isolates for characterization.

Transport Temperature: 2-8°C

*Testing is performed at no cost for epidemiological purposes.

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 6-8 weeks

IRT Immunoreactive Trypsinogen (see Newborn Screening Panel)

Lead Testing (see Blood Lead)

***Legionella sp.* Culture Isolation/ Identification**

Specimen Requirements: Submit fresh or frozen lung tissue, pleural fluid, bronchial washings, trans-tracheal aspirates, chest drainage, BAL, or sputum. Put a minimum of 1 ml specimen in a sterile, leak-proof container, and transport on ice in an insulated container.

CPT Code: 87081

Price: \$30.00

Transport Temperature: 2-8°C

Turn Around Time: DFA test performed each working day. Positive test results are telephoned to the submitter. Cultures are monitored for 14 days before reporting as negative.

NOTE: Both a DFA test and culture is performed on each primary specimen received.

***Legionella pneumophila* Groups 1-6 Direct Detection by Immunofluorescence**

Specimen Requirements: Nasopharyngeal (NP) or Throat swab smeared on microscope slide, or primary specimen as above.

CPT Code: 87278

Price: \$22.05

Turn Around Time: Performed each working day. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

***Legionella pneumophila* Groups 1-4 IgG Serology by Indirect Immunofluorescence**

Specimen Requirements: 2 ml. Serum

CPT Code: 86713

Paired acute and convalescent serum recommended (drawn approx. 4-6 weeks apart).

Price: \$19.10

Transport Temperature: Ambient

Turn Around Time: Routinely batched tested once per week.

***Leishmania* Detection**

Specimen Requirements: Lesion smear of tissue

CPT Code: 87207

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

***Leishmania* Serology by IFA**

Specimen Requirements: 2 ml. Serum

CPT Code: 86717

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

***Leptospira* Serology by INDX Dip-S-Ticks or IgM EIA**

Specimen Requirements: 2 ml. Serum

CPT Code: 86720

Paired acute and convalescent serum are recommended.

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

***Listeria* Culture Isolation/ Identification (see Bacterial Culture, Aerobic)**

Lyme Disease Culture (see *Borrelia burgdorferi* culture)

Lyme Disease Serology (see *Borrelia burgdorferi* serology)

***Lymphogranuloma venereum* (LGV) Culture (see Chlamydia Culture)**

Malaria Detection/ Identification (see Plasmodium Detection)

Malaria Serology (see Plasmodium Serology)

Maple Syrup Urine Disease (See Newborn Screening Panel)

Measles Serology (see Rubeola Serology)

Measles Culture (see Rubeola Culture)

Meningococcal Infection (see *Neisseria meningitidis* Culture)

Methicillin Resistant *Staphylococcus aureus* (MRSA) (see Antimicrobial Resistant Bacteria Confirmation)

Modified Acid Fast Stain

Specimen Requirements: Send specimens in sterile container. Add sterile saline or broth to tissues or other non-liquid specimens. Send isolates on LJ medium.

CPT Codes: 87206 (Stain)

Price: \$13.25

Transport Temperature: Ambient

Turn Around Time: 1-2 days. Positive results will be called to the submitter.

Mold Culture Isolation/ Identification (see Fungal Culture)

MRSA (see Antimicrobial Resistant Bacteria Confirmation)

Multispot HIV-1/HIV-2 Rapid Test

Specimen Requirements: 2 ml. Serum

CPT Code: 86703

Price: \$43.20

Turn Around Time: Test performed as needed

NOTE: This test is used to differentiate HIV-1 and HIV-2 and is used in an algorithm when the HIV-1/2 Antibody Plus O EIA is repeat reactive and the HIV-1 Western Blot is negative or indeterminate.

Transport Temperature: Ambient

Mumps Culture Isolation/Identification

Specimen Requirements: Saliva, Urine in Microtest Transport Media, received within 48 hours of collection. See specific instructions on page 39.

CPT Code: 87252

Price: \$35.35

Transport Temperature: 2-8°C

Contact the Public Health Laboratory if molecular testing is requested.

Turn Around Time: Positive results are telephoned to the submitter. Cultures are monitored for 2 weeks prior to a negative report.

Mumps IgG Serology by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86735

Screen or paired acute and convalescent specimens

Price: \$19.10

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

Mumps IgM Serology by IFA

Specimen Requirements: 2 ml. Serum

CPT Code: 86735

Price: \$19.10

Turn Around Time: Performed each working day, as needed. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

***Mycobacterium* sp. Culture Isolation/ Identification**

Specimen Requirements: Send specimens in sterile container. Add sterile saline or broth to tissues or other non-liquid specimens. Send isolates on LJ medium or in BACTEC or MB/BacT vials. See specific instructions on page 35.

CPT Codes: 87206 (stain) Price: \$13.25

87015 (concentration) Price: \$14.00

87116 (culture) Price: \$30.00

Total Price: \$57.25

Turn Around Time: Smear reports are faxed to submitter by 5 p.m. the same day specimen is processed. Positive results are telephoned to the submitter, cultures are monitored for 6 weeks prior to negative report.

Transport Temperature: Ambient

NOTE: After a patient has tested positive for *M. tuberculosis*, no more than three specimens per week from the same body site will be processed to determine response to therapy and infectious status, without prior consultation. To determine response to therapy, specimens should be obtained no sooner than 7 days post initiation of therapy.

***Mycobacterium* sp. Identification by Nucleic Acid Probe**

Specimen Requirements: Isolates sent on LJ slants or in BACTEC or MB/BacT vials, or as reflex testing on positive primary specimens submitted for culture.

CPT Code: 87555 (*M. tb* probe)

87560 (*M. avium* probe)

87550 (*M. gordonae* or *M. kansasii* probe)

Price: \$22.06 each

Turn Around Time: 1-3 days for submitted culture, others dependent on growth rate.

Transport Temperature: Ambient

NOTE: On initial isolation of an AFB from a new patient, both *M. tuberculosis* complex and *M. avium* complex probes will be run on the isolate. After *M. tuberculosis* complex has been confirmed in the patient, subsequent cultures received during the next six weeks will only be probed for *M. tuberculosis* complex.

***Mycobacterium tuberculosis* complex Antimicrobial Susceptibility Testing**

Specimen Requirements: Isolates sent on LJ slants or in BACTEC or B/BacT vials, or primary specimens submitted for culture. Reflex testing is performed on *Mycobacterium tuberculosis* complex isolates identified in this laboratory.

CPT Code: 87190 x 5 (\$13.95 each)

Total Price: \$ 69.75

Transport Temperature: Ambient

Agents tested: Isoniazid, Rifampin, Ethambutol, Streptomycin and PZA.

Turn Around Time: 7 to 14 days from date susceptibility testing is begun.

NOTE: Susceptibility testing for *M. tuberculosis* will be performed only on the first isolate from the patient, and will be repeated on subsequent isolates from specimens received 2 months after the initial specimens. Other susceptibility testing may be performed upon consultation.

***Mycobacterium tuberculosis* complex Direct Detection by Nucleic Acid Amplification**

Specimen Requirements: Processed concentrated specimen or primary respiratory specimen. See specific instructions on page 35.

CPT Code: 87556

Price: \$168.30

Turn Around Time: 1-3 days. Call ahead to make arrangements for testing.

Transport Temperature: Ambient

NOTE: The submitter of a AFB smear positive respiratory specimen will be contacted by the PHL and offered the direct nucleic acid amplification test for *M.tuberculosis* complex (MTD Test).

Testing will also be performed on culture negative specimens if the index of suspicion of *Tuberculosis* is high.

Mycology Culture (see Fungal Culture)

***Neisseria gonorrhoeae* Culture Isolation/ Identification**

Specimen Requirements: Primary culture or isolate on MTM or chocolate media; identification performed by Nucleic Acid Probe.

CPT Code: 87081

Price: \$30.00

Turn Around Time: 2-3 days. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: For public health surveillance, please submit all *N. gonorrhoeae* isolates to the Montana Public Health Laboratory. This is at no cost to the submitter (See Culture for Storage).

***Neisseria gonorrhoeae* Direct Detection by Nucleic Acid Amplification**

Specimen Requirements: Endocervical or male urethral swab in APTIMA Uni-Sex Swab Specimen Collection Tube, **or** urine in APTIMA Urine Specimen Collection Tube. See specific instructions on page 37.

CPT Code: 87591

Price: \$40.50

Transport Temperature: 2-30°C

Turn Around Time: Routinely tested each working day. Positive results are telephoned to the submitter.

NOTE: Can be run in tandem with *Chlamydia trachomatis* Direct Detection by Amplification (see Combination Amplification Test).

***Neisseria gonorrhoeae/Chlamydia trachomatis* Direct Detection by Nucleic Acid Amplification (Combination Amplification Test)**

Specimen Requirements: Endocervical or male urethral swab in APTIMA Uni-Sex Swab Specimen Collection Tube, **or** urine in APTIMA Urine Specimen Collection Tube. See specific instructions on page 37.

CPT Codes: 87591 (GC) Price: \$40.50

87491 (Chlam) Price: \$40.50

Total Price: \$81.00

Transport Temperature: 2-30°C

Turn Around Time: Routinely tested each working day. Positive results are telephoned to the submitter. *These tests can be ordered as a panel, but will be billed individually.*

***Neisseria* sp. (including *N. meningitidis*) Culture Isolation/Identification**

Specimen Requirements: Primary specimen or isolate on MTM or chocolate media

CPT Code (typing): 87147

Price: \$30.00

Turn Around Time: 2 - 4 days. Positive *N. meningitidis* results are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: Serogrouping is routinely performed on *N. meningitidis* isolates from sterile body sites such as blood or cerebral spinal fluid. Please submit all *N. meningitidis* isolates from sterile body sites to PHL for serogrouping and storage for epidemiologic purposes

Newborn Screening Panel

Specimen Requirements: Dried blood spots. See specific instructions on page 43.

Transport Temperature: Ambient

Total Price: \$91.70

Acylcarnitine Disorders by Tandem Mass Spectrometry (MS/MS)

CPT Code: 82017

Fatty Acid Oxidation Disorders

Price: \$11.75

Carnitine uptake defect

Long Chain L-3-Hydroxyacyl CoA Dehydrogenase Deficiency (LCHAD)

Medium Chain Acyl-CoA Dehydrogenase Deficiency (MCAD)

Trifunctional Protein Deficiency (TFP)

Very Long Chain Acyl-CoA Dehydrogenase Deficiency (VLCAD)

Organic Acidemia Disorders

3-OH 3-CH3 glutaric aciduria

3-Methylcrotonyl-CoA carboxylase deficiency

β-ketothiolase deficiency

Glutaric academia type I

Isovaleric academia

Methylmalonic academia (Cbl A and B)

Methylmalonic Acidemia (mutase deficiency)

Multiple CoA Carboxylase Deficiency (MCD)

Propionic academia

Amino Acid Disorders by Tandem Mass Spectrometry (MS/MS)

CPT Code: 82136

Argininosuccinic acidemia

Price: \$4.65

Citrullinemia

Homocystinuria (due to CBS deficiency)

Maple syrup urine disease

Phenylketonuria

Tyrosinemia type I

Biotinidase

CPT Code: 82261

Price: \$6.00

Classical galactosemia

CPT Code: 82775

Price: \$12.88

Congenital adrenal hyperplasia

CPT Code: 83498

Price: \$11.50

(21 hydroxylase deficiency)

Congenital hypothyroidism

CPT Code: (T4) 84437

Price: \$11.50

CPT Code: (TSH) 84443

*Price: \$10.12

Cystic Fibrosis (IRT)

CPT Code: 83516

Price: \$11.50

Hemoglobinopathies

CPT Code: 83020

Price: \$10.12

Hb S/B-thalassemia

Hb SC disease

Hb SS disease (Sickle cell anemia)

HPLC

CPT Code: 87143

*Price: \$33.00

Phenylketonuria (PKU)

CPT Code: 84030

Price: \$11.80

Turn Around Time: 2 - 5 days. Abnormal results are telephoned to the submitter. *These tests are ordered as a panel, but will be billed individually. Under special circumstances these tests may be ordered separately. Contact the Public Health Laboratory for further information.*

Note: Reflex confirmatory TSH testing is performed on all T4 results that are less than 10 ug/dL

Reflex confirmatory HPLC testing is performed on all abnormal hemoglobinopathy screens.

Acylcarnitine and Aminoacidopathy testing by MS/MS is referred to the Wisconsin State Newborn Screening Laboratory.

*Not included in total cost of routine testing panel.

***Nocardia* sp. Culture Isolation/ Identification (see Fungal Culture)**

***Nocardia* sp. Serology**

Specimen Requirements: 2 ml. Serum

CPT Code: 86744

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks.

Transport Temperature: Ambient

Norovirus Direct Detection by Nucleic Acid Amplification

Specimen Requirements: 2 ml stool in a sterile container. See specific instructions on page 40-41.

CPT Code: 83891 (Extraction)

and 87798 (Amp Probe)

Price: \$75.50

Turn Around Time: 1-3 days. Positive results are telephoned to the submitter. All results are faxed to the submitter.

Transport Temperature: 2-8°C

Ova and Parasite Exam

Specimen Requirements: Stool transported in tubes containing Formalin and PVA. Collect stool into a clean specimen container. Using the spoon inside the transport material, immediately transfer about 1 teaspoon of stool to a vial of 5% buffered formalin, and then transfer a similar quantity of stool to a vial containing PVA. Stool should be emulsified into the transport media. The formalin and PVA transport containers are available upon request.

CPT Code: 87177 (concentration/ID) Price: \$20.00

88313 (Trichrome stain) Price: \$20.00

Total Price: \$40.00

Transport Temperature: Ambient

Turn Around Time: 1 - 2 working days. Positive results are telephoned to the submitter.

Organic Acidemias/Fatty Acid Oxidation (see Newborn Screening Panel)

Orthopoxvirus, including Variola (Smallpox), Vaccinia, and Monkey Pox

Direct Detection by Real Time PCR

Specimen Requirements: Lesion swab in Microtest Transport Media *plus* an additional lesion swab transported dry in a sterile container. Call the laboratory for special instructions regarding environmental samples.

CPT Code: 87798

Price: \$69.40

Transport Temperature: 2-8°C

A suspect Orthopoxvirus requires Infectious Disease packaging (Class 6.2) and trackable shipping. Please notify the PHL at time of shipment.

Turn Around Time: 1-3 days. Results are telephoned to the submitter.

Orthopoxvirus, Other Than Variola, Direct Detection by Real Time PCR

Specimen Requirements: Lesion swab in Microtest Transport Media *plus* an additional lesion swab transported dry in a sterile container. See specific instructions on page 40-41.

CPT Code: 87798

Price: \$69.40

Transport Temperature: 2-8°C

Turn Around Time: 1-3 days. Results are telephoned to the submitter.

Paragonimus Detection

Specimen Requirements: Lung tissue

CPT Code: 87207

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Paragonimus Serology

Specimen Requirements: 2 ml. Serum

CPT Code: 86317

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Parainfluenza Types 1 - 3 Culture (See Respiratory Virus Isolation).**Parasite Detection (see Ova and Parasite Exam)****Paratyphoid Fever (see *Salmonella sp.*)****Parvovirus Serology IgG & IgM by EIA**

Specimen requirements: 2 ml. Serum

CPT Code: 86747

Price: \$9.40

Referred to the Oregon State Public Health Laboratory, Salem, OR.

Turn Around Time: 2-4 weeks

Transport Temperature: Ambient

Pasteurella sp.* Culture Isolation/ Identification (see Bacterial Culture, Aerobic)*PCP (see *Pneumocystis carinii* (now *P. jiroveci*) Detection)*****Penicillium sp.* Culture Isolation/ Identification (see Fungal Culture)****Pertussis (see *Bordetella pertussis*)****PFGE (see Pulsed Field Gel Electrophoresis)****Phenylalanine Monitor by Fluorescent Immunoassay**

Specimen Requirements: Dried blood spots. See specific instructions on page 43.

CPT Code: 84030

Price: \$11.80

Used to monitor levels in patients diagnosed with phenylketonuria (PKU).

Transport Temperature: Ambient

Turn Around Time: 1 - 2 days. All PKU Monitor results are telephoned to the submitter.

PKU Phenylalanine (see Newborn Screening Panel)**Plague (see *Yersinia pestis*)****Plasmodium Detection**

Specimen Requirements: Blood smear, thick and thin; unstained or stained with Giemsa or Wright's Stain, **and** whole blood in EDTA tube (for possible PCR testing).

CPT Code: 87207

Price: \$26.55

Transport Temperature: Ambient

Turn Around Time: 1-2 days. Positive samples for confirmation and specimens for PCR testing are referred to the Centers for Disease Control, Atlanta, Georgia.

Plasmodium Serology by IFA

Specimen Requirements: 2 ml. Serum

CPT Code: 86750

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 2-4 weeks

Transport Temperature: Ambient

NOTE: Serology is performed only on patients whose blood slides are repeatedly negative, and have compatible travel history.

Pneumococcal Infection (see *Streptococcus pneumoniae*)

***Pneumocystis carinii* (now *Pneumocystis jiroveci*) Detection**

Testing is no longer available through this laboratory or the Centers for Disease Control. Submit specimen to an alternate reference laboratory.

Premarital Testing (see Rubella IgG Serology)

***Pseudomonas sp.* Culture Isolation/ Identification (see Bacterial Culture, Aerobic)**

Pulsed Field Gel Electrophoresis (for Enterics)

Specimen Requirements: Send non-fastidious Gram negative rods or Gram positive isolates on solid media or on swab in Cary-Blair transport medium.

CPT Code: None

Price: No Cost*

Transport Temperature: Ambient

*Testing is performed at no cost for epidemiological purposes.

For public health surveillance, please submit all isolates of *Salmonella* spp., *Shigella* spp., toxin-producing *E. coli*, *Listeria* spp., and *Vibrio*.

NOTE: Please contact the Laboratory in advance regarding special infection control studies.

Pulsed Field Gel Electrophoresis (for *Staphylococcus aureus*)

Specimen Requirements: Send *Staphylococcus aureus* isolates on solid media or on swab in Cary-Blair transport medium.

CPT Code: None

Price: \$76.60

NOTE: Minimum of 3 isolates required

Transport Temperature: Ambient

Please contact the Laboratory in advance regarding number of isolates.

Q Fever (*Coxiella burnetti*) Phase 1 and Phase 2 IgG Serology by Indirect Immunofluorescence

Specimen Requirements: 2 ml. Serum

CPT Code: 86638

Paired acute and convalescent serum are recommended.

Price: \$19.10

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

Quantiferon – Gold (QFT – Gold) Testing

This assay is an in vitro test for the determination of latent Tuberculosis infection and can be used as an alternative to the TB skin test (PPD).

CPT Code: TBD

Price: TBD

Contact the Public Health Laboratory for further information and specimen collection instructions.

Rabies Detection for Diagnostic Purposes (Animal Testing)

Animal Testing - Not performed by our Laboratory.

Refer specimens to the Veterinary Diagnostic Laboratory in Bozeman, (406) 994-4885.

Rabies Detection for Diagnostic Purposes (Human Testing)

Human Testing for Diagnostic Purposes - Consult the Laboratory for specific sampling requirements and proper handling and transport.

CPT Code: None
Price: No cost

Human Diagnostic Testing is referred to the Centers for Disease Control, Atlanta, Georgia.

Transport Temperature: Call for instructions

Turn Around Time: Preliminary results (PCR) are available as soon as possible, usually the same day as receipt.

Rabies Serology for Immune Status Antibody Testing by RFFIT

Testing not available through this Laboratory.

Testing available from:
Atlanta Health Associates, Alpharetta, Georgia (770) 667-8023,
Kansas State University, Manhattan, KS (785) 532-4483
or other reference laboratories.

For further information visit
<http://www.vet.ksu.edu/depts/dmp/service/rabies/index.htm>

Respiratory Syncytial Virus Culture (See Respiratory Virus Culture)

Respiratory Syncytial Virus Direct Detection by Direct Fluorescence Assay

Specimen Requirements: Nasal wash or Nasopharyngeal (NP) swab in Microtest Transport Media, or acetone fixed slide from NP swab. See specific collection instructions on page 39.

CPT Code: 87280
Price: \$22.10

Turn Around Time: Performed each working day. Results are telephoned to the submitter.

Media Transport Temperature: 2-8°C
Slide Transport Temperature: Ambient

Respiratory Virus Culture Isolation/Identification

Specimen Requirements: Throat or NP Swab, Nasal or Bronchial Wash, BAL in Microtest Transport Media, received within 48 hours of collection. See specific instructions on page 39.

CPT Code: 87252
Price: \$35.35

Transport Temperature: 2-8°C

Turn Around Time: Positives results are telephoned to the submitter; cultures are monitored for 2 weeks prior to reporting as negative.

NOTE: Respiratory specimens for virus isolation are screened for the presence of the following commonly isolated viruses: Adenovirus, Influenza A, Influenza B, Parainfluenza Type 1, 2, and 3, Respiratory Syncytial Virus, Enterovirus (including Echovirus and Coxsackie A & B), and Herpes Simplex Virus.

Ricin Rapid Tests

Specimen Requirements: Environmental samples only

CPT Code: None
Price: No cost

Turn Around Time: 1-3 days. Call the laboratory prior to sending sample. Results are telephoned to the submitter.

Transport Temperature: Ambient

Rickettsial Serology (see Rocky Mountain Spotted Fever, Typhus Fever Serology)

***Rochalimea* sp. Culture Isolation/ Identification (see *Bartonella* sp. Culture)**

***Rochalimea* sp. Serology (see Bartonella Serology)**

Rocky Mountain Spotted Fever IgG Serology by Indirect Immunofluorescence

Specimen Requirements: 2 ml. Serum

CPT Codes: 86757 (RMSF) Price: \$19.10

Paired acute and convalescent serum recommended.

86790 (CTFV) Price: \$19.10

Total Price: \$38.20

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: Colorado Tick Fever testing will be automatically performed on all requests for Rocky Mountain Spotted Fever.

RSV (see Respiratory Syncytial Virus)

Rubella IgG Serology by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86762

Screen or paired acute and convalescent specimens

Price: \$19.10

For premarital testing for Rubella immunity, download instructions and electronic forms at

Transport Temperature: Ambient

www.dphhs.mt.gov/PHSD/Lab/Environmental/pdf/premaritalcertfillable.pdf

Turn Around Time: Routinely batch tested once per week.

Significant results are telephoned to the submitter.

Rubella IgM Serology by Indirect Immunofluorescence

Specimen Requirements: 2 ml. Serum; include date of onset of rash, which should be at least 48 hours before specimen draw.

CPT Code: 86762

Price: \$19.10

Turn Around Time: Performed each working day, as needed.

Transport Temperature: Ambient

Positive results are telephoned to the submitter.

Rubeola (Measles) Culture Isolation/Identification

Specimen Requirements: Throat or NP Swab in Microtest Transport

CPT Code: 87252

Media, received within 48 hours of collection. See specific instructions on page 39.

Price: \$35.35

Transport Temperature: 2-8°C

Turn Around Time: Positive results are telephoned to the submitter; cultures are monitored for 2 weeks prior to reporting as negative.

Rubeola (Measles) IgG Serology by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86765

Screen or paired acute and convalescent specimens.

Price: \$19.10

Turn Around Time: Routinely batch tested once per week.

Transport Temperature: Ambient

Significant results are telephoned to the submitter.

Rubeola (Measles) IgM Serology by Indirect Immunofluorescence

Specimen Requirements: 2 ml. Serum; include date of onset of rash, which should be at least 48 hours before specimen draw.

CPT Code: 86765

Price: \$19.10

Turn Around Time: Performed each working day, as needed. IgM results are telephoned to the submitter.

Transport Temperature: Ambient

***Salmonella* sp. (including *S. typhi*) Culture Isolation/Identification**

Specimen Requirements: Stool in Cary-Blair Transport, or other commercial enteric transport media, or isolate in Cary Blair transport or on solid media. See Enteric Panel for specific instructions.

CPT Code: 87077
Price: \$37.50

Transport Temperature: 2-8°C

Biochemically confirmed *Salmonella* sp. will be serotyped for epidemiologic purposes at no additional cost.

For public health surveillance, please submit all isolates of Salmonella sp. to the Montana Public Health Laboratory. See Enteric Culture Surveillance.

Turn Around Time: 2 to 4 days. Positive identification results are telephoned to the submitter.

Schistosoma Detection

Specimen Requirements: Stool in formalin/PVA transports **or** urine in leak-proof sterile container

CPT Code: 87177(Conc ID) Price: \$20.00
88313 (Trichrome) Price: \$20.00

Turn Around Time: 1-2 days; Positive samples are referred for confirmation to the Centers for Disease Control, Atlanta, Georgia

Stool Transport Temperature: Ambient
Urine Transport Temperature: 2-8°C

Schistosoma Serology by FAST-ELISA

Specimen Requirements: 2 ml. Serum

CPT Code: 86682
Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia
Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

***Shigella* sp. Culture Isolation/Identification**

Specimen Requirements: Stool in Cary-Blair Transport, or other commercial enteric transport media, isolate in Cary Blair transport or on solid media. See Enteric Panel for specific instructions.

CPT Code: 87077
Price: \$37.50

Transport Temperature: Ambient

For public health surveillance, please submit all isolates of Shigella sp. to the Montanan Public Health Laboratory. See Enteric Surveillance Culture.

Turn Around Time: 2 to 4 days. Positive results are telephoned to the submitter.

Sin Nombre Virus (see Hantavirus Serology)

Sporothrix Culture Isolation/ Identification (see Fungal Culture)

Sporothrix Serology by Latex and/or Tube Agglutination

Specimen Requirements: 2 ml. Serum

CPT Code: 86317
Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia
Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

St Louis Encephalitis IgM Serology by EIA

This test may be ordered individually. Due to the cross-reactivity of West Nile Virus (WNV) and St Louis Encephalitis Virus (SLE), SLE serology may be performed on specimens with a borderline WNV test result.

CPT Code: 86790

Price: \$19.10

Transport Temperature: Ambient

Specimen Requirements: 2 mL. Serum and/or 1 mL. CSF

Date of onset is required, and the city or county of patient's residence is requested.

Negative results on specimens drawn less than 9 days from date of onset should have a convalescent serum tested if active disease is suspected.

Turn Around Time: Routinely batch tested twice per month. Positive results are telephoned to the submitter. Certain specimens may be referred to the Centers for Disease Control in Fort Collins, Colorado for confirmation using more specific Plaque Reduction Neutralization tests.

***Staphylococcus sp.* Culture Isolation/ Identification (see Bacterial Culture, Aerobic)**

Staphylococcus Enterotoxin B Rapid Tests

Specimen Requirements: Environmental samples only

CPT Code: None

Price: No cost

Turn Around Time: 1-3 days. Call the laboratory prior to sending sample. Results are telephoned to the submitter.

Transport Temperature: Ambient

Stool Culture (see Enteric Panel)

STEC (see *Escherichia coli* Shiga-Like Toxin Assay)

***Streptococcus pneumoniae* Culture Isolation/ Identification (see Bacterial Culture, Aerobic)**

***Streptococcus* Group A Screen, Culture Method**

Specimen Requirements: Throat swab in silica gel

CPT Code: 87081

Price: \$30.00

Turn Around Time: Positive results are telephoned to the submitter; cultures are monitored for 48 hours prior to reporting as negative.

Transport Temperature: Ambient

***Streptococcus sp.* Culture Isolation/ Identification (see Bacterial Culture, Aerobic)**

Strongyloides Detection (see Ova and Parasite Exam)

Strongyloides Serology by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86317

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Syphilis Serology Screen (Qualitative) by VDRL

Specimen Requirements: 2 ml. Serum, or 1 ml. CSF

CPT Code: 86592

Price: \$12.40

Turn Around Time: Routinely batch tested twice per week.
Positive results are automatically quantitated and telephoned to the submitter.

Transport Temperature: Ambient

Syphilis Serology Screen (Quantitative) by VDRL

Specimen Requirements: 2 ml. Serum, or 1 ml. CSF

CPT Code: 86593

Price \$12.75

Turn Around Time: Routinely batch tested twice per week. Results are telephoned to the submitter.

Transport Temperature: Ambient

NOTE: Reflex confirmatory FTA-ABS testing is performed on all serum VDRL specimens with results of Reactive 2 dilutions or greater. Initial results of Weakly Reactive or Reactive 1 dil should have a second specimen submitted.

T4 Thyroxine by Fluorometric Assay (see Newborn Screening Panel)

Specimen Requirements: Dried blood spot. See specific instructions on page 43.

CPT Code: 84437

Price: \$11.50

Test is used to monitor therapy in newborns with congenital hypothyroidism (CH).

Transport Temperature: Ambient

Turn Around Time: 2 - 5 days; abnormal results are reflexed to TSH testing and telephoned to the submitter.

Tick-borne Disease Serology Panel (Rocky Mountain Spotted Fever IgG, Colorado Tick Fever IgG, Q-Fever IgG, Tularemia IgG and Brucella IgG) by IFA, Bacterial Agglutination

Specimen Requirements: 3 ml. Serum

Paired acute and convalescent serum recommended.

CPT Codes: 86757 (RMSF) Price: \$19.10

86790 (CTFV) Price: \$19.10

86638 (QF) Price: \$19.10

86668 (Tul) Price: \$17.20

86622 (Bruc) Price: \$17.20

Total Price: \$91.70

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter. *These tests may be ordered as a panel, but will be billed individually.*

Note: Although not a tick-borne disease, Brucella testing is performed on all requests for Tularemia due to antigen cross

Transport Temperature: Ambient

Tick-borne Relapsing Fever (see *Borrelia hermsii* Serology)

Torch Screen, IgG only by EIA

(Toxoplasma, Cytomegalovirus, Rubella, Herpes Simplex Virus Type 1 and 2)

Specimen Requirements: 2 ml. Serum

Paired acute and convalescent serum recommended. For newborns, include mother's serum for baseline paired specimen.

CPT Codes: 86777 (Toxo) Price: \$19.10

86644 (CMV) Price: \$19.10

86762 (Rubella) Price: \$19.10

86695 (Herpes Simplex 1) Price: \$19.10

86696 (Herpes Simplex 2) Price: \$19.10

Total Price: \$95.50

Turn Around Time: Routinely batch tested once per week.
Significant results are telephoned to the submitter. *These tests may be ordered as a panel, but will be billed individually.*

Transport Temperature: Ambient

Torch Screen, IgG + IgM by EIA (Toxoplasmosis IgG + IgM, Cytomegalovirus IgG + IgM, Rubella IgG + IgM, Herpes Simplex Virus IgG, Type 1 and 2)

Specimen Requirements: 2 ml. Serum, include date of onset.

CPT Codes: 86777 (Toxo) Price: \$19.10

86644 (CMV) Price: \$19.10

86762 (Rubella) Price: \$19.10

86695 (Herpes Simplex 1) Price: \$19.10

86696 (Herpes Simplex 2) Price: \$19.10

86778 (Tox M) Price: \$34.20

86645 (CMV M) Price: \$34.20

86762 (Rub M) Price: \$19.10

Total Price: \$183.00

Turn Around Time: Routinely batch tested once per week.

IgM testing performed each working day, as needed.

Positive IgM results are telephoned to the submitter. *These tests may be ordered as a panel, but will be billed individually.*

Transport Temperature: Ambient

Toxic Screen, Rapid Chemical Exposure

Call ahead for information on proper collection, packaging, and transport and shipment of blood and urine specimens.

CPT Code: None

Price: No cost

Prior arrangements must be made with MT Laboratory Services.

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 36 hours

Toxocara Serology by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86317

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Toxoplasmosis IgG Serology by EIA

Specimen Requirements: 2 ml. Serum

CPT Code: 86777

Screen or paired acute and convalescent specimens

Price: \$19.10

Turn Around Time: Routinely batch tested once per week. Positive results are telephoned to the submitter.

Transport Temperature: Ambient

Toxoplasmosis IgM Serology by Indirect Immunofluorescence

Specimen Requirements: 2 ml. Serum

CPT Code: 86778

Price: \$34.20

Turn Around Time: Testing performed each working day, as needed.

Significant results are telephoned to the submitter.

Transport Temperature: Ambient

***Treponema pallidum* (See Syphilis Serology or Fluorescent Treponemal Antibody)**

Trichinella Serology

Specimen Requirements: 2 ml. Serum

CPT Code: 86784

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Trypanosomiasis Detection

Specimen Requirements: Blood smear, unstained or stained with Wright's or Giemsa.

CPT Code: 87207

Price: \$26.55

Turn Around Time: 1-2 days, positive smears are referred for confirmation to the Centers for Disease Control, Atlanta, Georgia

Transport Temperature: Ambient

Trypanosomiasis Serology

Specimen Requirements: 2 ml. Serum

CPT Code: 86682

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Tuberculosis (See *Mycobacterium* sp.)

Tularemia Culture (See *Francisella tularensis* culture)

Tularemia Serology (See *Francisella tularensis* serology)

Typhoid Fever (See Enteric Panel or *Salmonella* sp.)

Typhus Fever IgG Serology by Indirect Immunofluorescence

Specimen Requirements: 2 ml. Serum

CPT Code: 86256

Paired acute and convalescent serum are recommended.

Price: \$9.40

Referred to the Centers for Disease Control, Atlanta, Georgia

Turn Around Time: 3-6 weeks

Transport Temperature: Ambient

Tyrosinemia (See Newborn Screening Panel)

Vancomycin Resistant Enterococci (VRE) (See Antimicrobial Resistant Bacteria Confirmation)

Varicella Zoster (Herpes Zoster) Virus Culture Isolation/Identification

Specimen Requirements: Specimen, usually vesicular fluid, in
Microtest Transport Media, received within 48 hours of collection.
See specific instructions on page 39.

CPT Code: 87252

Price: \$35.35

Transport Temperature: 2-8°C

Turn Around Time: Positive results are telephoned to the submitter.
Cultures are monitored for 1 month prior to a negative report.

Varicella Zoster Virus Direct Detection by Direct Fluorescence Assay

Specimen Requirements: Slide prepared from vigorously scraping the base of
a fresh lesion with a Dacron swab. Smear specimen over a small (dime) sized
circle on the microscope slide. Avoid excess blood contamination of the
specimen. Fix slide with acetone prior to submission.

CPT Code: 87290

Price: \$22.10

Transport Temperature: Ambient

Turn Around Time: Performed each working day. Positive results are
telephoned to the submitter.

NOTE: Traditional cell culture should also be performed. See Varicella
Zoster (Herpes Zoster) Virus Culture Isolation/ ID.

Varicella Zoster Virus (Herpes Zoster Virus) IgG Serology by EIA

Specimen Requirements: 2 ml. Serum
Screen or paired acute and convalescent specimens.

CPT Code: 86787

Price: \$19.10

Turn Around Time: Routinely batch tested once per week; available each working day, as needed. Significant and STAT results are telephoned to the submitter.

Transport Temperature: Ambient

To qualify for *STAT* testing, all of the following criteria must be met:

1. The patient is at high risk for complications and has been recently exposed to a known case of chickenpox. High risk patients are defined as immunocompromised persons, pregnant women, premature infants whose mothers are not immune, premature infants < 28 weeks gestation, and premature infants < 1000 grams at birth
2. The patient does not have a history of chicken pox and/or does not know their immune status.
3. Exposure has been recent enough that the 96 hour window for administration of VZIG is achievable if the testing determines the patient to be susceptible to VZV infection.

Varicella Zoster Virus Direct Detection by Real Time PCR

Specimen Requirements: Vesicular lesion swab in Microtest
Transport Media. See specific instructions on page 40-41.

CPT Code: 87798

Price: \$69.40

Turn Around Time: 1-3 days. Results are telephoned to the submitter.

Transport Temperature: 2-8°C

VDRL Serology (see Syphilis serology)

***Vibrio* sp. Culture Isolation/ Identification**

Specimen Requirements: Stool in Cary-Blair transport, or other commercial enteric transport media, or isolate submitted in Cary-Blair transport or on solid media. Specify agent on request form.

CPT Code: 87046

Price: \$30.00

Turn Around Time: 2 to 4 days. Positive results are telephoned to the submitter.

Transport Temperature: 2-8°C

Virus Culture Isolation/Identification

Specimen Requirements: Specimen in Microtest Transport Media, received within 48 hours of collection. See specific instructions on page 39.

CPT Code: 87252

Price: \$35.35

Turn Around Time: Positive results are telephoned to the submitter. Cultures are monitored for 2 weeks prior to a negative report.

Transport Temperature: 2-8°C

NOTE: Specimens for virus isolation are screened for the presence of the following commonly isolated viruses: Adenovirus, Influenza A, Influenza B, Parainfluenza Type 1, 2, and 3, Respiratory Syncytial Virus, Enterovirus (including Coxsackie A& B and Echovirus) and Herpes Simplex Virus.

VRE (see Antimicrobial Resistant Bacteria Confirmation)

Western Blot (see HIV-1 Antibody)

West Nile Virus IgM Serology by EIA

NOTE: Serology is the recommended method of testing for WNV in both serum and Cerebral Spinal Fluid (CSF), as viremia (as detected by PCR) is very transient.

CPT Code: 86789

Price: \$17.35

Transport Temperature: Ambient

Specimen Requirements: 2 mL. Serum and/or 1 mL. CSF

Date of onset is required, and the city or county of patient's residence is requested.

NOTE: Negative results on specimens drawn less than 9 days from date of onset, should have a convalescent serum tested if active disease is suspected.

Turn Around Time: Routinely batch tested once per week; during seasonal outbreaks, testing may be performed each working day, depending on workload. Positive results are telephoned to the submitter. Certain specimens may be referred to the Centers for Disease Control in Fort Collins, Colorado for confirmation using more specific Plaque Reduction Neutralization tests, and equivocal (borderline) results may be reflexed to St. Louis Encephalitis IgM Serology.

West Nile Virus IgG Serology by EIA

Specimen Requirements: 2 mL. Serum Paired acute and convalescent specimens recommended.

CPT Code: 86788

Price: \$17.35

Date of onset is required, and the city or county of patient's residence is requested.

Transport Temperature: Ambient

Turn Around Time: Routinely batch tested once per week; during seasonal outbreaks, testing may be performed each working day, depending on workload. Positive results are telephoned to the submitter.

Yeast Culture (see Fungal Culture Isolation/Identification)

Yersinia enterocolitica Culture Isolation/Identification

Specimen Requirements: Stool in Cary-Blair transport, or other commercial enteric transport media, or isolate submitted in Cary-Blair transport or on solid media. Specify agent on request form.

CPT Code: 87046

Price: \$30.00

Transport Temperature: 2-8°C

Turn Around Time: 2 to 4 days. Positive results are telephoned to the submitter.

***Yersinia pestis* Culture Isolation/ Identification/Rapid Test Methods**

Specimen Requirements: Isolate submitted on solid agar medium or tissue transported cold in sterile saline. *Call the laboratory for special instructions regarding environmental samples and rapid test methods.*

CPT Code: 87077 (Culture ID)
Price: \$30.00
87798(PCR)
Price: \$69.40

A suspect Y. pestis culture requires Infectious Disease packaging (Class 6.2) and trackable shipping. Please notify the PHL at time of shipment.

Transport Temperature: 2-8°C

Turn Around Time: Cultures will be held for 7-10 days before reporting as negative. Results are telephoned as soon as possible to the submitter. Rapid test methods are available within 6 hours of specimen receipt.

***Yersinia pestis* Serology by Passive Hemagglutination**

Specimen Requirements: 2 ml. Serum

CPT Code: 86793
Price: \$9.40

Referred to the Centers for Disease Control, Fort Collins, Colorado
Turn Around Time: 4-6 weeks

Transport Temperature: Ambient

COLLECTION AND TRANSPORT OF SPECIMENS FOR MYCOBACTERIUM (TB) TESTING

ALL SPECIMENS ARE POTENTIALLY INFECTIOUS

HANDLE CAREFULLY

| | |
|----------------------------------|---|
| Sputum or Nebulized Sputum | Collect three early morning specimens on successive days and submit daily in separate containers. Good specimens are material brought up by the lungs after a productive cough or nebulization. Send a minimum of 2.5 ml in a sterile container. |
| Urine | Collect multiple early morning "clean catch" specimens on successive days. Send a minimum of 10 ml in a sterile container. |
| Gastric | Collect three early morning fasting specimens on successive days. Send a minimum of 10 ml in a sterile container. Add 10 mg of sodium bicarbonate to neutralize the acidity. Send promptly after collection; these specimens should be processed as soon as possible. |
| Bronchial Washings | Submit first sputum specimen following bronchoscopy as well as the bronchial washings. Send a minimum of 2.5 ml in a sterile container. |
| Tissues | Collect aseptically and place in sterile container. Add about 5 ml sterile broth or sterile saline to tissues and swabs to prevent dehydration. |
| CSF or Other Sterile Body Fluids | Submit in sterile collection tube; at least 1 ml is needed for an adequate test. |
| Blood or Bone Marrow | Collect in heparinized tube or add sterile heparin (0.2 mg/ml) to prevent clotting. Send a minimum of 1 ml in a sterile container. |
| Stool | Submit 1 gram of raw stool in a sterile container. Send on ice. |

Use only sterile materials in the collection of the specimen. Collect specimen directly into the sterile bottle provided or into a sterile container, then refrigerate specimen and send as soon as possible. Make certain that the container is labeled with patient identifier and collection date.

Screw lid onto specimen container tightly so specimen does not leak; place specimen container in biohazard ziplock bag containing absorbent material and seal bag tightly.

Fill out standard laboratory test request form. See specific instructions on page 46.

Place form in outside sleeve of biohazard ziplock bag and put into TB mailing container. Transport at ambient temperature by mail or courier.

COLLECTION AND TRANSPORT OF SPECIMENS FOR FUNGAL CULTURES

| | |
|--|---|
| Tissue | Place tissue in sterile screw cap container and cover with 5 ml of sterile saline or broth. Refrigerate until time of mailing. |
| Blood | Collect 8 ml blood aseptically in a yellow Vacutainer tube (contains 0.05% SPS). This specimen can be used to inoculate a vented biphasic blood culture bottle containing TSB, TSA, or BHI agar and broth in a ratio of 1 part blood to 10 parts broth. Incubate at room temperature. Subculture onto Sabouraud's agar slants according to established procedures. Submit either slants or blood culture bottles for culture identification. |
| Bone marrow | Collect approximately 0.3 ml of bone marrow in a heparinized tube. Refrigerate specimen until mailing, and ship in sterile screw cap container. |
| Bronchial wash, Pleural fluid, Joint fluid, Sputum | Send in sterile screw cap container. May be sent in TB transport container. Refrigerate specimen until mailing. |
| CSF | Send a minimum of 1.0 ml in sterile screw cap container. Refrigerate specimen until mailing. |
| Hair | Remove about 10 hairs with roots using forceps; place hairs between clean glass slides or in clean envelope. Wrap slides in paper and tape closed. Send in mailer. NOTE: Hairs that break off at scalp level when using forceps must be removed with a knife. Scraping the scalp rarely yields infected hairs. |
| Skin | Wipe lesions well with alcohol sponge (cotton will leave too many fibers on skin). Scrape the entire periphery of the lesion(s) with a sterile scalpel. Place scrapings between two clean glass slides as discussed under hair, or in an envelope. Send in mailer. |
| Nails | Clean nail with alcohol gauze. Scrape and discard outer portion of nail. Collect scrapings from inner nail and send in envelope or between glass slides. Send an entire nail, if it has been removed, in a sterile screw cap container. |

Please Note: Both a TB culture and a fungal culture can be processed from a single specimen by request. Make certain that test request form is clearly marked.

Place specimen container in a biohazard ziplock bag containing absorbent material and seal bag tightly. Make certain that container is labeled with patient identifier and collection date.

Fill out standard laboratory test request form. See specific instructions on page 46.

Place form in outside sleeve of biohazard ziplock bag and put into mailing container. Transport at ambient temperature by mail or courier.

COLLECTION AND TRANSPORT OF SPECIMENS FOR APTIMA CHLAMYDIA/GONORRHEA TESTING

Both the Unisex Swab Collection Kit and Urine Specimen Collection Kit are stored at room temperature.

ENDOCERVICAL SWAB COLLECTION

1. Remove excess mucus from the cervical os and surrounding mucosa using the white shafted cleansing swab. **Discard the white shafted swab.**
2. Insert the blue shafted specimen collection swab into the endocervical canal.
3. Gently rotate the swab clockwise for 10 to 30 seconds in the endocervical canal to ensure adequate sampling.
4. Withdraw the swab carefully; avoid any contact with the vaginal mucosa.
5. Remove the cap from the swab specimen transport tube and immediately place the specimen collection swab into the transport tube.
6. Carefully break the blue swab shaft at the scoreline; use care to avoid splashing of contents.
7. Re-cap the swab specimen transport tube tightly. Make certain the transport tube is labeled with a minimum of patient name; collection date is also helpful.

MALE URETHRAL SWAB COLLECTION

1. The patient should not have urinated for at least one hour prior to sample collection.
2. Insert the blue shafted specimen collection swab 2 – 4 cm into the urethra.
3. Gently rotate the swab clockwise for 2 to 3 seconds in the urethra to ensure adequate sampling.
4. Withdraw the swab carefully.
5. Remove the cap from the swab specimen transport tube and immediately place the specimen collection swab into the transport tube.
6. Carefully break the blue swab shaft at the scoreline; use care to avoid splashing of contents.
7. Re-cap the swab specimen transport tube tightly. Make certain the transport tube is labeled with a minimum of patient name; collection date is also helpful.

SWAB SPECIMEN TRANSPORT

1. After collection, transport and store swab specimen transport tube at 2°C to 30°C.
2. Place transport tube in an individual zip lock bag containing absorbent material and seal bag tightly.
3. Fill out laboratory test request form completely. Place this in the sleeve of the zip lock bag; **DO NOT** put the request form inside the zip lock bag.
4. Place transport tubes in white mailing canisters and transport to the Public Health Laboratory by mail or courier.
5. Although swab specimens in the specimen transport tube may be tested within **60 days of collection**, we advise you to submit specimens in a timely manner so that test results can be obtained as soon as possible.

URINE COLLECTION

1. The patient should not have urinated for at least one hour prior to sampling.
2. Direct patient to provide a first-catch urine (approximately 20 to 30 mL of the initial urine stream) into a urine collection cup. Collection of larger volumes of urine may reduce test sensitivity. Female patients should not cleanse the labial area prior to providing the specimen. This is **NOT** a clean catch urine – we want the initial urine stream which contains sloughed cells.
3. Remove the cap and transfer 2 mL of urine into the urine specimen transport tube using the disposable pipette provided. **The correct volume of urine has been added when the fluid level is between the black lines on the urine specimen transport tube label.**
8. Re-cap the urine specimen transport tube tightly. This is now known as the *processed urine specimen*. Make certain the transport tube is labeled with a minimum of patient name; collection date is also helpful.

URINE SPECIMEN TRANSPORT

1. After collection, transport and store processed urine specimens (those in urine specimen transport tubes) at 2°C to 30°C.
2. Place transport tube in an individual zip lock bag containing absorbent material and seal bag tightly.
3. Fill out laboratory test request form completely. Place this in the sleeve of the zip lock bag; **DO NOT** put the request form inside the zip lock bag.
4. Place transport tubes in white mailing canisters and transport to the Public Health Laboratory by mail or courier.
5. Although urine specimens in the specimen transport tube may be tested within **30 days of collection**, we advise you to submit specimens in a timely manner so that test results can be obtained as soon as possible.

COLLECTION AND TRANSPORT OF SPECIMENS FOR CHLAMYDIA ISOLATION

Culture Method

Microtest Collection kits, containing swabs and transport media, are supplied by the Laboratory. Store at room temperature. Expiration date is printed on the collection kit. This same collection media can be used for viral isolation specimens.

| | |
|------------------------------|---|
| Autopsy/Biopsy Specimens | Place a small piece of the tissue into Microtest Transport Media. |
| Endocervical Specimens | Wipe the cervix with one of the swabs in the collection kit prior to sample collection to remove mucus and WBC. Insert the second swab into the cervical os to collect cells from the transitional zone. Rotate the swab vigorously in firm contact with the endocervical surface to facilitate the collection of columnar epithelial cells. Place swab in Microtest Transport Media, break off at the score line, and tightly cap. |
| Eye (Conjunctival) Specimens | Place swab from conjunctiva in Microtest Transport Media, break off at the score line, and tightly cap. |
| Nasal Washes/Aspirates | Introduce 1-2 ml. of sterile saline into the nasopharyngeal cavity, aspirate, and mix with an equal volume of Microtest Transport Media. |
| Nasopharyngeal Swab | Use the flexible shaft small dacron swab to collect the specimen. Place swab into Microtest Transport Media, trim swab so that the shaft is below the capline, and tightly cap. |
| Rectal Mucosa | Place swab into Microtest Transport Media, break off at the score line, and tightly cap. |
| Throat Swab | Place swab into Microtest Transport Media, break off at the score line, and tightly cap. |
| Urethral Swab | Patient should not have urinated within one hour of collection. Insert a small swab into the urethra and hold to absorb body fluids. Rotate the swab several times to obtain columnar epithelial cells, then withdraw. Place swab into Microtest Transport Media, break off at the score line, and tightly cap. |

Make certain tube is labeled with patient identifier and collection date. Place transport tube in ziplock bag containing absorbent material and seal bag tightly.

Fill out standard laboratory test request form completely and place in the outer sleeve of the biohazard ziplock bag. See specific instructions on page 46. Do not place the request form inside the biohazard ziplock bag.

Specimens must be kept cold from the time they are collected until the time they are processed by the Laboratory. Shipment must be done promptly, so that specimens are received by the Laboratory within 48 hours of collection. Specimens must be shipped in a cold condition, usually by the use of cold packs and Styrofoam containers. The mailers will be returned for reuse. Transport by mail or courier.

COLLECTION AND TRANSPORT OF SPECIMENS FOR VIRAL ISOLATION Culture Method

Microtest Collection Kits, containing swabs and transport media, are supplied by the Laboratory. Store the kits at room temperature. The expiration date is printed on the collection kits. This same media is used for Chlamydia isolation.

| | |
|---|--|
| Autopsy/Biopsy Specimens | Place a small piece of the tissue into Microtest Transport Media. |
| Bronchial Alveolar Lavage (BAL) /Bronchial Washings | Mix an equal portion of the BAL or bronchial washing with Microtest Transport Media. |
| Buffy Coat | Collect 2 tubes (7 - 10 ml. each) of heparinized blood. |
| Cerebral Spinal Fluid | Mix an equal portion of the CSF with Microtest Transport Media. |
| Endocervical Specimens | Place swab from cervix in Microtest Transport Media, break off at the score line, and tightly cap. |
| Eye (Conjunctival) Specimens | Place swab from conjunctiva in Microtest Transport Media, break off at the score line, and tightly cap. |
| Lesion Swabs/Scrapings | Place swab from fresh lesion into Microtest Transport Media, break off at the score line, and tightly cap. |
| Nasal Washes/Aspirates | See detailed instructions under Amplification Test Collection. Introduce 1-2 ml. of sterile saline into the nasopharyngeal cavity, aspirate, and mix with an equal volume of Microtest Transport Media. |
| Nasopharyngeal Swab | See detailed instructions under Amplification Test Collection. Use the flexible shaft small dacron swab to collect the specimen. Place swab into Microtest Transport Media, trim shaft below the capline, and tightly cap. |
| Rectal Swab | Place swab into Microtest Transport Media, break off at the score line, and tightly cap. |
| Saliva | Mix an equal portion of saliva with Microtest Transport Media. |
| Stool | Emulsify a small portion of the stool (smaller than a pea) in Microtest Transport Media. |
| Throat Swab | See detailed instructions under Amplification Test Collection. Place swab into Microtest Transport Media, break off at the score line, and tightly cap. |
| Urethral Swab | Place swab into Microtest Transport Media, break off at the score line, and tightly cap. |
| Urine | Mix an equal portion of urine with Microtest Transport Media. |
| Vesicular Fluid | Aspirate fluid from fresh unbroken vesicle and place into Microtest Transport Media. |

Make certain tube is labeled with patient identifier and collection date. Place transport tube in biohazard ziplock bag containing absorbent material and seal bag tightly.

Fill out standard laboratory test request form completely and place in the outer sleeve of the biohazard ziplock bag. See specific instructions on page 46. Do not place the request form inside the biohazard ziplock bag.

Specimens must be kept cold from the time they are collected until the time they are processed by the Laboratory. Shipment must be done promptly, so that specimens are received by the Laboratory within 48 hours of collection. Specimens must be shipped in a cold condition, usually by the use of cold packs and Styrofoam containers. Mailers will be returned for reuse. Transport by mail or courier.

COLLECTION AND TRANSPORT OF SPECIMENS FOR NUCLEIC ACID AMPLIFICATION TESTING

For technical assistance in determining proper specimen selection for specific agents, call the Public Health Laboratory at 800-821-7284.

Microtest Transport Media for Viral Agents is supplied by the Laboratory. Store the kits at room temperature.

| | |
|---|---|
| Bronchial Alveolar Lavage (BAL) /Bronchial Washings | <p>For Viral Agents, mix an equal portion of the BAL with Microtest Transport Media. Store in cold conditions and ship on blue ice packs.</p> <p>For Bacterial Agents, collect in sterile container. Store in cold conditions and ship on blue ice packs.</p> |
| Cerebral Spinal Fluid | Place 1 – 2 ml. In sterile container without transport. Store in cold conditions and ship on blue ice packs. |
| Cervical Swab | Place swab into Microtest Transport Media, break off at the score line, and tightly cap. Store in cold conditions and ship on blue ice packs. |
| Nasopharyngeal Aspirate | Introduce 1-2 ml. of sterile saline into the nasopharyngeal cavity, aspirate into sterile vial. Store in cold conditions and ship on blue ice packs. |
| Nasopharyngeal Wash | Use only sterile saline to collect the NP wash. Instruct the patient to sit with head slightly tilted backwards, and to hold the sterile collection cup. Instruct the patient on how to constrict the muscles at the back of the throat by saying the “K” sound rapidly and repetitively. Inform the patient that this process may prevent the saline from draining down the throat. Fill a 5 cc syringe with warm sterile saline. Gently push the tip of the patient’s nose back with your thumb, and quickly inject 1 – 2 ml. of sterile saline into each nostril. Instruct the patient to contain the saline in the nostrils for approximately 10 seconds while repetitively saying the “K” sound. After 10 seconds, ask the patient to tilt their head forward and collect the saline in the sterile cup. Cap the washings tightly. Refrigerate the nasopharyngeal washings until transport and ship on blue ice packs. |
| Nasopharyngeal Swab | <p>Use a flexible wire dacron or polyester swab. Do not use Calcium Alginate swabs. Instruct the patient to sit with head slightly tilted backwards. Bend the flexible wire in a small arc, and insert the swab into the nostril back to the nasopharyngeal cavity. The patient’s eyes will momentarily tear. Slowly rotate the swab as it is being withdrawn.</p> <p>For Viral Agents, place swab into Microtest Transport Media, trim swab shaft, and tightly cap. Store in cold conditions and ship on blue ice packs.</p> <p>For Bacterial Agents, place swab in sterile tube without transport.</p> |
| Serum | Collect 5-10 ml of whole blood in serum separator tube. Allow blood to clot, centrifuge and aliquot resulting sera. Store in cold conditions and ship on blue ice packs. If serum has already been frozen, ship on dry ice. |
| Sputum | Collect a deep cough sputum directly into a sterile collection cup or dry container. Store in cold conditions and ship on blue ice packs. |

COLLECTION AND TRANSPORT OF SPECIMENS FOR NUCLEIC ACID AMPLIFICATION TESTING

(continued)

| | |
|--|--|
| Stool | Collect at least 2 ml of stool in a leak-proof, clean, dry container. Store in cold conditions and ship on blue ice packs. |
| Throat Swab | <p>Use a plastic shafted Dacron swab. Using a tongue depressor, insert the swab and vigorously rub the tonsils and the posterior pharynx. Carefully remove the swab, not touching any area of the mouth.</p> <p>For Viral Agents, place swab into Microtest Transport Media, trim swab shaft, and tightly cap. Store in cold conditions and ship on blue ice packs.</p> <p>For Bacterial Agents, place swab in sterile tube without transport.</p> |
| Tissue Specimens Autopsy or Biopsy | <p>For Viral Agents, place each specimen in separate sterile containers containing small amounts of Microtest Transport Media. Store and ship on blue ice packs or dry ice. Do Not submit formalized tissue.</p> <p>For Bacterial Agents, place each specimen in separate sterile containers containing small amounts of sterile saline or PBS. Store and ship on blue ice packs. Do Not submit formalized tissue.</p> |
| Vesicles/Vesicular Fluid/ Scrapings | Aspirate fluid from multiple fresh unbroken vesicles and place into a small amount of Microtest Transport Media. Remove the top of the vesicle and place the skin of the vesicle top into a sterile tube without transport. Store both samples in cold conditions and ship on blue ice packs. |

Make certain tube is labeled with patient identifier, collection date and specimen source. Place transport tube in biohazard ziplock bag and seal bag tightly.

Fill out laboratory test request form completely and place in the outer sleeve of the biohazard ziplock bag. See specific instructions on page 46. Do not place the request form inside the biohazard ziplock bag.

Ship specimens promptly, maintaining cold temperature from collection until receipt at the Laboratory. For those specimens that must be shipped in a cold condition, use cold packs and Styrofoam containers. Mailers will be returned for reuse. Transport by mail or courier.

COLLECTION AND TRANSPORT OF SEROLOGY SPECIMENS

TESTING POLICY: If **DATE OF ONSET** is not present on laboratory request form, a convalescent specimen will be requested. True "ACUTE Phase" specimens will not be tested until the convalescent specimen is received. If more than four weeks pass without receipt of a convalescent specimen, the acute only specimen will be run and reported with a disclaimer that based on date of onset, specimen may have been collected prior to the production of significant antibodies. When acute and convalescent specimens are tested at the same time, only the convalescent specimen will be billed.

| | |
|-------------------------------------|---|
| Acute Specimen | The DATE OF ONSET of symptoms or disease is less than 7 days from the date serum is obtained, usually the first few days of the illness. IgG antibody titers are not elevated. Exceptions: Rubeola, Rubella, and Colorado Tick Fever and Rocky Mountain Spotted Fever may have a significant IgG titer in 7-10 days. |
| Convalescent Specimen | The DATE OF ONSET of symptoms or disease is 2 weeks or greater from the date serum is obtained. IgG antibody levels should be at a significant level. Exception: <i>Legionella sp.</i> antibody levels may not be significant for 4-6 weeks. |
| Screen Only Single Specimen Only | The patient has a chronic condition, with the DATE OF ONSET of symptoms or disease being a very long period of time (months to years), OR patient is being screened for antibodies to a certain infectious agent (HIV, Hepatitis B, Rubella, VZV, Toxoplasma, etc.) OR IgM testing is available. Single specimen test results may be difficult to interpret and an additional specimen may be requested if results warrant. |

Submit approximately 2 - 4 ml. of clear non-hemolyzed serum for testing. Contact the Laboratory for exact volumes needed if serum is difficult to obtain. Serum separator tubes can be used. Spin the SST tubes well to completely separate the serum and cells and submit the whole tube. Serum does not have to be poured off. DO NOT submit unspun SST tubes. If serum is not submitted in the original SST tube, place in a leakproof container.

Cerebral Spinal Fluid (CSF) may also be submitted for serological testing in certain instances. A serum sample should also be submitted with the CSF for comparison testing.

Specimens should be clearly labeled with patient name or other identifier, and the collection date. Completely fill out the standard laboratory request form. Specific instructions for filling out the standard form are on page 46.

Each serum tube must be tightly sealed in an individual biohazard ziplock bag containing absorbent material to prevent leakage and contamination. Place the completed laboratory request form in the outer sleeve of the biohazard ziplock bag. **Do not** place the completed laboratory request form inside the ziplock bag.

If specimen is stored prior to shipment, store at 4°C. If storage is longer than 1 week, freeze the specimen. Specimens may be shipped at room temperature. Labeled pre-addressed mailing canisters are available from the Laboratory. Transport by mail or courier.

COLLECTION AND TRANSPORT OF SPECIMENS FOR NEWBORN SCREENING

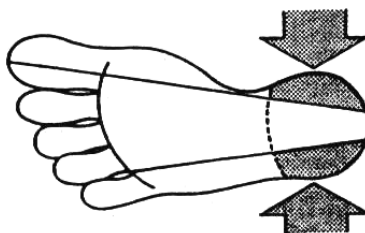
Newborn screening specimen cards for collection of dried blood spot samples are available from the Public Health Laboratory. See Supply Order form on page 51. These forms contain the requisition form along with the attached filter paper collection device.

Store specimen cards in a cool dry place on edge; flat stacking compresses the filter paper fibers. Do not handle the filter paper portion, as skin oils will prevent saturation.

Complete all the information on the requisition form legibly in capital letters using block. See specific instructions on page 50.

Sample Collection

The usual puncture site is illustrated below (shaded areas).



1. Sterilize and dry skin. Puncture heel with sterile lancet.
2. Allow large blood droplet to form.
3. Touch filter paper to blood and allow to soak through completely in each circle. Total saturation of the circles must be evident when the paper is viewed on both sides. **Do not apply blood to both sides.**
4. Use of capillary tubes is not recommended because they tend to roughen the filter paper and cause over absorption.
5. **Allow blood spots to air dry thoroughly for 2 – 3 hours at room temperature.** Keep away from direct sunlight and heat. Do not stack filter papers before thorough drying. Protective cover can be used to hold specimen while drying.
6. Cover with end flap only after specimen is completely dry.
7. Transport specimen by mail or courier at ambient temperature within 24 hours of collection.

Note: Specimens may be **UNSATISFACTORY** if:

- All circles not completely filled (QNS)
- Blood is layered by application on both sides or by multiple spotting
- Filter paper is scuffed or torn
- Specimen is contaminated or improperly dried
- Information is incomplete

COLLECTION AND TRANSPORT INSTRUCTIONS

CAPILLARY (FINGER STICK) SPECIMENS FOR BLOOD LEAD

Collection supplies are available free of charge by contacting the Montana Public Health Laboratory.

The Capillary Collection Kit includes:

2 Sterile Alcohol Preps

1 Lancet

1 Transport zip lock bag

1 Dry Sterile Gauze Pad

1 Capillary collection device

1 Instruction sheet

Performing the Skin Puncture:

1. Thoroughly wash hands and don powder free gloves.
2. Select the puncture site. Blood can be obtained from:
 - a) fingertip (for adults and children older than 1 year)
 - b) the bottom of the big toe (infants only)
 - c) the heel (infants only)
3. Clean the puncture site with alcohol pad. If the site is extremely soiled or very cold, wash with warm soapy water and towel dry. Use the alcohol swab to briskly scrub the puncture site to remove any environmental contamination and to increase blood flow.
4. Allow the site to air dry or use the sterile gauze to dry the area.
5. Puncture the skin with the lancet.

Collection of the Sample:

1. Use the gauze to wipe off the first drop of blood, which contains excess tissue fluid. A rounded drop of blood will form over the puncture site. When the tip of the collection device touches this drop, blood will flow by capillary action into the tube. Care should be taken that the tip of the collection device is in contact with the blood only, not the fingertip/toe. Gently apply continuous pressure to the surrounding tissue; avoid milking the site.
2. Turn the collection device during collection to help mix the blood and preservative. Fill the collection device approximately halfway between the two marked lines (approximately 300 μ l). Draw the remaining blood from the capillary apparatus into the tube by removing the capillary tube and top as one unit. Close the tube with the separate cap provided.
3. Apply pressure to the puncture site with a gauze pad to stop the patient's bleeding, while simultaneously mixing the specimen manually by inverting a minimum of 10 times.
4. Identify each skin puncture specimen with the patient's name, at a minimum, and collection date.

Submitting Specimens to the Public Health Laboratory for Testing:

1. Complete a laboratory requisition (see page 46) to include the patient's name, date of birth, gender, collection date, submitter information, and, if applicable, Medicaid billing information.
2. Place the well mixed, unclotted blood specimen into the ziplock transport bag. Fold the requisition form and place in sleeve of the bag. Place the ziplock bag(s) into a preaddressed white mailing canister. Store the specimen(s) in the refrigerator until shipped. Specimens are transported at ambient temperature by mail or courier.
3. Specimens are stable for 7 days at refrigeration temperatures.

Results:

1. Laboratory test results will be mailed to the submitter upon completion of testing.
2. Should the initial test be elevated, a venipuncture specimen will be requested for verification.

COLLECTION AND TRANSPORT INSTRUCTIONS

VENIPUNCTURE SPECIMENS FOR BLOOD LEAD

Collection supplies are available free of charge by contacting the Montana Public Health Laboratory.

The Venipuncture Collection Kit includes:

| | | |
|-------------------------|---|--------------------------|
| 1 Sterile Alcohol Preps | 1 Needle and Holder or 1 Needle and syringe | 1 Transport zip lock bag |
| 1 Dry Sterile Gauze Pad | 1 Vacutainer EDTA tube | 1 Instruction sheet |

Preparation of the Puncture Site:

1. Thoroughly wash hands and don powder free gloves.
2. Expose the selected antecubital fossa and apply tourniquet to mid-biceps. Scrub the puncture site briskly with the alcohol pad to remove any environmental contamination and to increase blood flow.
3. Allow the site to air dry or use the sterile gauze to dry the area.

Collection of the Sample:

1. Prepare needle assembly, either needle and vacutainer holder, or needle and syringe.
2. Perform venipuncture per standard operating procedures. Make sure the vacutainer tube is completely filled before stopping collection. If using a needle and syringe, obtain a minimum of 2 ml. of whole blood.
3. Remove tourniquet first, then needle from arm.
4. Apply pressure to the puncture site with a gauze pad to stop the patient's bleeding. Parent/guardian or child may continue holding direct pressure on the puncture site.
5. If drawn directly into vacutainer tube, immediately mix the specimen manually by inverting a minimum of 10 times.
6. If drawn with a needle into the syringe, immediately inject the blood from the syringe into the vacutainer tube, gently mixing while filling. Continue to mix the specimen by inverting 10 times.
7. Dispose of used needle and syringe equipment into puncture proof Sharps container.
8. Identify each skin puncture specimen with the patient's name, at a minimum, and collection date.

Submitting Specimens to the Public Health Laboratory for Testing:

1. Complete a laboratory requisition (see on page 46) to include the patient's name, date of birth, gender, collection date, submitter information, and, if applicable, Medicaid billing information.
2. Place the well mixed, unclotted blood specimen into the ziplock transport bag. Fold the requisition form and place in sleeve of the bag. Place the ziplock bag(s) into a preaddressed white mailing canister. Store the specimen(s) in the refrigerator until shipped. Specimens are transported at ambient temperature by mail or courier.
3. Specimens are stable for 7 days at refrigeration temperatures.

Results: Laboratory test results will be mailed to the submitter upon completion of testing.

CLINICAL LABORATORY REQUISITION FORMS

Various requisition forms are available through the Laboratory office by calling 1-800-821-7284:

- The **standard request form**, preprinted with your account information; all clinical testing can be ordered with this form. (See page 46)
- A specific form for **chlamydia/gonorrhea screening** only; this form collects additional information for public health program planning. (See page 48)
- A **newborn screening panel** form; this form contains the dried blood spot collection kit. (See page 50)

Examples of each form are included on the following pages, as well as specific instructions on filling out the Chlamydia/GC and Newborn Screening forms.

General Instructions:

Please fill the forms out completely to include (at a minimum):

Patient Last Name or anonymous identifier

Patient First Name

Patient ID #

Date of Birth

Gender

Medicaid # (if applicable)

NPI (or UPIN) # of Physician/Clinician (preferred)

Physician/Clinician Name (if NPI is not provided)

Specimen Collection Date

Date of Onset of Illness (for serology and molecular testing)

Source of Specimen (If source is serum, indicate if the serum is acute, convalescent, or a screen only)

Test(s) Ordered

NOTE: Forms are read using an optical scanning device. Please print information clearly in boxes indicated. Do not use preprinted labels or stamps.

STANDARD LABORATORY TESTING REQUISITION FORM

MONTANA DEPARTMENT OF PUBLIC HEALTH & HUMAN SERVICES Public Health Laboratory

P.O. Box 6489, Helena, MT 59604-6489
(406) 444-3444 (800) 821-7284 CLIA ID # 27D0652531

| PATIENT INFORMATION | | PROVIDER INFORMATION | |
|---|--|---|--|
| LAST NAME <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | | PHYSICIAN / CLINICIAN NAME <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | |
| FIRST NAME <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | | | |
| PATIENT ID # <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | | | |
| DATE OF BIRTH <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> | | UPIN # <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | |
| GENDER <input type="checkbox"/> Male <input type="checkbox"/> Female | | LAB USE ONLY | |
| MEDICAID # <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | | | |
| TEST(S) REQUESTED INFORMATION | | | |
| Serology: <input type="checkbox"/> TORCH Panel IgG <input type="checkbox"/> Tick Borne Disease Panel <input type="checkbox"/> Hepatitis Acute Panel <input type="checkbox"/> Blood Lead <input type="checkbox"/> Brucella Antibody <input type="checkbox"/> CTFV IgG Serology <input type="checkbox"/> Cytomegalovirus IgG Antibody <input type="checkbox"/> Cytomegalovirus IgM Antibody <input type="checkbox"/> Fluorescent Treponemal Antibody (FTA-ABS) <input type="checkbox"/> Hantavirus IgG & IgM Serology <input type="checkbox"/> Herpes Simplex Virus IgG Serology <input type="checkbox"/> HIV-1 Antibody <input type="checkbox"/> Legionella IgG Serology <input type="checkbox"/> Mumps IgG Serology <input type="checkbox"/> Q Fever IgG Serology <input type="checkbox"/> RMSF IgG Serology <input type="checkbox"/> Rubella IgG Antibody <input type="checkbox"/> Rubella IgM Antibody <input type="checkbox"/> Rubeola (Measles) IgG Antibody <input type="checkbox"/> Rubeola (Measles) IgM Antibody <input type="checkbox"/> Syphilis Serology <input type="checkbox"/> Syphilis Serology, Quantitative | | <input type="checkbox"/> Toxoplasma IgG Antibody <input type="checkbox"/> Toxoplasma IgM Antibody <input type="checkbox"/> Tularemia Antibody <input type="checkbox"/> Varicella Zoster Virus IgG Serology <input type="checkbox"/> West Nile Virus IgM Serology <input type="checkbox"/> West Nile Virus IgG Serology <input type="checkbox"/> Hepatitis B Surface Antigen <input type="checkbox"/> Hepatitis B Surface Antibody <input type="checkbox"/> Hepatitis B Total Core Antibody <input type="checkbox"/> Hepatitis B Core IgM Antibody <input type="checkbox"/> Hepatitis A IgM Antibody <input type="checkbox"/> Hepatitis C Antibody <input type="checkbox"/> HCV RNA Quantitation Surveillance Cultures (no charge): <input type="checkbox"/> GC Confirmation/Susceptibility <input type="checkbox"/> Salmonella/Shigella/E. coli <input type="checkbox"/> ESBL Confirmation <input type="checkbox"/> MRSA Confirmation <input type="checkbox"/> VRE Confirmation <input type="checkbox"/> Influenza Confirmation Chlamydia Culture: <input type="checkbox"/> Chlamydia Culture | |
| Virus Culture: <input type="checkbox"/> Respiratory Virus Isolation <input type="checkbox"/> Enteric Virus Isolation <input type="checkbox"/> CNS Virus Isolation <input type="checkbox"/> Virus Isolation <input type="checkbox"/> Cytomegalovirus Isolation <input type="checkbox"/> Herpes Simplex Virus Isolation <input type="checkbox"/> Varicella Zoster Virus Isolation <input type="checkbox"/> RSV Direct Detection Nucleic Acid Amplification: <input type="checkbox"/> Chlamydia and Gonorrhea <input type="checkbox"/> Chlamydia Only <input type="checkbox"/> Gonorrhea Only <input type="checkbox"/> Varicella Zoster PCR <input type="checkbox"/> Enterovirus NAAT <input type="checkbox"/> Influenza A PCR <input type="checkbox"/> Influenza B PCR <input type="checkbox"/> Adenovirus PCR <input type="checkbox"/> Metapneumovirus PCR <input type="checkbox"/> Norovirus NAAT <input type="checkbox"/> M. tuberculosis Direct Amplification <input type="checkbox"/> Bordetella pertussis PCR | | Microbiology: <input type="checkbox"/> Autoclave Monitoring-BT Test <input type="checkbox"/> Chemclave Monitoring Test <input type="checkbox"/> Enteric Panel Culture <input type="checkbox"/> Campylobacter screen <input type="checkbox"/> Yersinia screen <input type="checkbox"/> Vibrio screen <input type="checkbox"/> EHEC (STEC) Toxin Test <input type="checkbox"/> Clostridium difficile Toxin Test <input type="checkbox"/> Bacteriology Culture/ID, Aerobic <input type="checkbox"/> Bacteriology Culture/ID, Anaerobic <input type="checkbox"/> Bordetella pertussis Direct Detection <input type="checkbox"/> Bordetella pertussis Culture/ID <input type="checkbox"/> Legionella Direct Detection <input type="checkbox"/> Legionella Culture/ID <input type="checkbox"/> Neisseria gonorrhoeae Culture/ID <input type="checkbox"/> Streptococcus Group A Culture Screen <input type="checkbox"/> TB Mycobacteria Culture/ID <input type="checkbox"/> Fungus Culture/ID <input type="checkbox"/> Ova and Parasite Exam <input type="checkbox"/> Cryptosporidium/Cyclospora Detection <input type="checkbox"/> Malaria Screen | |
| Test(s) Requested (If Not Listed) <div style="border: 1px solid black; height: 40px; width: 100%;"></div> | | Comments / Pertinent Information / Symptoms <div style="border: 1px solid black; height: 40px; width: 100%;"></div> | |
| SPECIMEN COLLECTION DATE <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> | | SPECIMEN SOURCE <div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"><input type="checkbox"/> Throat/NP Swab</div> <div style="width: 33%;"><input type="checkbox"/> Cervical Swab</div> <div style="width: 33%;"><input type="checkbox"/> CSF</div> <div style="width: 33%;"><input type="checkbox"/> Stool/Rectal Swab</div> <div style="width: 33%;"><input type="checkbox"/> Urethral Swab</div> <div style="width: 33%;"><input type="checkbox"/> Bronchial Washings</div> <div style="width: 33%;"><input type="checkbox"/> Lesion Swab</div> <div style="width: 33%;"><input type="checkbox"/> Sputum</div> <div style="width: 33%;"><input type="checkbox"/> Other _____ (Specify)</div> <div style="width: 33%;"><input type="checkbox"/> Urine</div> <div style="width: 33%;"><input type="checkbox"/> EDTA Blood</div> <div style="width: 33%;"><input type="checkbox"/> Eye</div> <div style="width: 33%;"><input type="checkbox"/> Acute Serum</div> <div style="width: 33%;"><input type="checkbox"/> Convalescent Serum</div> <div style="width: 33%;"><input type="checkbox"/> Serum Screen Only</div> </div> | |
| DATE OF ONSET <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> | | | |

CHLAMYDIA/GC SCREENING REQUISITION FORM

This form collects additional demographic information for public health program planning. Please submit this completed form with requests for chlamydia screening.

| | | | |
|--|--|---|---------|
| MONTANA DEPARTMENT OF PUBLIC HEALTH & HUMAN SERVICES Public Health Laboratory | | P.O. Box 6489, Helena, MT 59604-6489 (406) 444-3444 (800) 821-7284 CLIA ID # 27D0652531 | 3236339 |
| PATIENT INFORMATION | | PROVIDER INFORMATION | |
| LAST NAME <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | | PHYSICIAN/CLINICIAN NAME <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | |
| FIRST NAME <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | | | |
| PATIENT ID # <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | | UPIN # <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | |
| DATE OF BIRTH <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> | | | |
| ZIP CODE OF PATIENT <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> | | LAB USE ONLY | |
| MEDICAID # <div style="border: 1px solid black; height: 20px; width: 100%;"></div> | | | |
| GENDER <input type="checkbox"/> Male <input type="checkbox"/> Female | | RACE <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Native Amer. <input type="checkbox"/> Asian <input type="checkbox"/> Other <input type="checkbox"/> Unknown | |
| ETHNICITY <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic <input type="checkbox"/> Unknown | | | |
| CLINICAL INFORMATION | | TEST(S) REQUESTED INFORMATION | |
| RISK HISTORY <i>(Check all that apply)</i> <input type="checkbox"/> > 1 partner past 90 days <input type="checkbox"/> New partner past 90 days <input type="checkbox"/> Does not always use condoms <input type="checkbox"/> Previous Chlamydia + in last 12 mo. <input type="checkbox"/> None of the above | | REASON FOR EXAM <i>(Check all that apply)</i> <input type="checkbox"/> Symptomatic <input type="checkbox"/> Routine - Asymptomatic <input type="checkbox"/> Exposed to Chlamydia <input type="checkbox"/> Exposed to Gonorrhea <input type="checkbox"/> Exposed to Other STD | |
| CLINICAL SIGNS <i>(Check all that apply)</i> <input type="checkbox"/> Cervical Friability <input type="checkbox"/> Mucopus <input type="checkbox"/> PID <input type="checkbox"/> Urethritis <input type="checkbox"/> None | | SPECIMEN COLLECTION DATE <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> | |
| DID YOU PRESUMPTIVELY TREAT THIS PATIENT FOR CHLAMYDIA? <input type="checkbox"/> Yes <input type="checkbox"/> No | | TEST REQUESTED <input type="checkbox"/> Chlamydia & Gonorrhea <input type="checkbox"/> Gonorrhea Only <input type="checkbox"/> Chlamydia Only | |
| | | SOURCE <input type="checkbox"/> Cervical <input type="checkbox"/> Other _____ <input type="checkbox"/> Urethral <input type="checkbox"/> Urine | |
| | | (Specify) | |

MTPHL 0802

CHLAMYDIA LAB/DATA FORM INSTRUCTIONS

PATIENT NAME: Please print clearly. LAST NAME first. The last name will be transformed into a numeric code and combined with date of birth to create a confidential ID code for date transmission.

DATE OF BIRTH: Please record in the MONTH/DAY/YEAR fashion. This field MUST be completed.

PATIENT ZIP CODE: Please print clearly and record the 5 digit zip code of the patient's residence. This will be used to determine the geographic distribution of chlamydia.

SPECIMEN COLLECTION DATE: This is the date the patient was seen at the clinic and a specimen for chlamydia testing was obtained. Please record in the MONTH/DAY/YEAR fashion.

RACE/ETHNICITY: These are separate categories which conform to the U.S. Census as well as other national data systems.

| | |
|---|--|
| RACE: (check only one box) This information is obtained from the patient. Asian includes Pacific Islander. Native American includes Alaskan native. Use "Other" for persons of mixed race. | <input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Native American <input type="checkbox"/> Asian <input type="checkbox"/> Other <input type="checkbox"/> Unknown |
| ETHNICITY: (check only one box) If unsure, ask the patient if they consider themselves to be Hispanic. | <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic <input type="checkbox"/> Unknown |
| RISK HISTORY: (check all that apply) First three factors are self-explanatory. <u>Previous Chlamydia +</u> refers to whether the patient has had a positive chlamydia test during the past year. | <input type="checkbox"/> >1 partner past 90 days <input type="checkbox"/> New partner past 90 days <input type="checkbox"/> Does not always use condoms <input type="checkbox"/> Previous Chlamydia + in last 12 months <input type="checkbox"/> None of the Above |
| REASON FOR EXAM: (check all that apply) This information is obtained from the patient. The first two boxes should be used to indicate whether the patient has symptoms; <u>only one of these</u> should be checked. In addition, you may also check one or more "Exposed to" boxes if these apply. | <input type="checkbox"/> Symptomatic <input type="checkbox"/> Routine - Asymptomatic <input type="checkbox"/> Exposed to Chlamydia <input type="checkbox"/> Exposed to Gonorrhea <input type="checkbox"/> Exposed to other STD |
| CLINICAL SIGNS: (check all that apply) <u>Cervical Friability</u> refers to easily induced bleeding with the initial swab. <u>Mucopus</u> refers to yellow or green mucopurulent discharge from the cervix, <u>PID</u> refers to Pelvic Inflammatory Disease. Signs and symptoms suggestive of PID include: abdominal pain/tenderness on pelvic exam, vaginal discharge/bleeding, dysuria, fever and sometimes nausea or vomiting. <u>Urethritis</u> refers to urethral discharge or dysuria. <u>None</u> refers to absence of all of the above clinical signs on exam. | <input type="checkbox"/> Cervical Friability <input type="checkbox"/> Mucopus <input type="checkbox"/> PID <input type="checkbox"/> Urethritis <input type="checkbox"/> None |
| TREATMENT: Based on clinic/epidemiologic assessment, was the patient sent home with medication (or prescription) to treat chlamydia without waiting for chlamydia test results? | Did you presumptively treat this patient for Chlamydia? <input type="checkbox"/> Yes <input type="checkbox"/> No |

NEWBORN SCREENING REQUISITION FORM

This form has attached special filter paper for collection of the blood spots.

MONTANA DPHHS NEWBORN SCREENING
Public Health Laboratory, P.O. Box 6489, Helena, MT 59604-6489
(406) 444-3444 (800) 821-7284 CLIA ID # 27D0652531

MONTANA DPHHS NEWBORN SCREENING
Public Health Laboratory
P.O. Box 6489, Helena, MT 59604-6489

141928

Do Not Write in This Space

Baby's
Last Name _____
First Name _____
Gender ☐ M ☐ F
ID Number _____

Mother's
Last Name _____
First Name _____
Physician _____
Medicaid ID Number _____
Physician UPIN # _____

RACE OF BABY
☐ White ☐ Native Amer. ☐ Other
☐ Black ☐ Asian ☐ Unk

ETHNICITY OF BABY
☐ Non-Hispanic ☐ Unk
☐ Hispanic

SPECIMEN
☐ 1st ☐ Repeat

BIRTH DATE _____
DATE SPECIMEN COLLECTED _____

BIRTH WEIGHT (grams) _____
COLLECTION WEIGHT
☐ Greater than 1500 grams
☐ If not, Enter Weight (gm) _____

AGE AT TIME OF COLLECTION
☐ < 24 Hours ☐ > 24 Hours

IS THE BABY FEEDING? ☐ Y ☐ N
HAS THE BABY RECEIVED A TRANSFUSION? ☐ Y ☐ N
IS THIS BABY HOSPITALIZED? ☐ Y ☐ N

SCREEN FOR THE FOLLOWING DISEASES/TESTS:
☐ Newborn Screening Panel (Required)
Includes PKU, Congenital Hypothyroidism and Galactosemia
☐ Cystic Fibrosis Screen (IRT)
☐ Acylcarnitine Profile (MS/MS)
☐ Biotinidase
☐ Congenital Adrenal Hyperplasia
☐ Other (specify) _____

WHATMAN BFC 180
LOT # 4588
141928
READ INSTRUCTIONS ON BACK OF FORM.
DO NOT HANDLE FILTER PAPER.
DO NOT APPLY BLOOD TO BOTH SIDES.

All information contained on the form must be completed.

Complete the patient information (name, sex, ID#, race, ethnicity) as well as the mother's name and baby's physician.

Mark the specimen as to whether this is the first screen performed on the baby, or repeat screen. If the baby was screened at the hospital, and then is followed up with a repeat test at the physician's office, mark the repeat box.

Accurately complete the birth date and specimen collection date. If the birth date and specimen date are only 1 day apart, and the >24 hour box is not marked, the baby will be assumed to be < 24 hours of age at the time of collection. Samples obtained from a child less than 24 hours old must be repeated.

Complete the birth weight in grams and mark if the collection weight is greater than 1500 grams. If the collection weight is not >1500 grams, enter the weight in grams in the blank provided. Samples obtained on a child < 1500 grams of weight must be repeated.

Answer the questions on transfusion history. In cases when the baby received a transfusion, please include the date of transfusion. Samples must be repeated 90-120 days post transfusion.

As of January 2008, the entire Newborn Screening panel is mandatory.

This same form can be used for monitoring Thyroxine levels on infants less than 6 months of age and Phenylalanine levels on patients with known PKU disease.

Montana Public Health Laboratory
1-800-821-7284

Supply Order Form

Revised 04/04/07
phl\forms\supkc1.doc

Physician/ Laboratory _____

Facility _____

Street Address _____

City/State/Zip _____

Date Ordered: _____

Quantity

Supplies

_____ Chlamydia/GC Aptima **SWAB** Collection Kits

_____ Chlamydia/GC Aptima **URINE** Collection Kits

_____ Tuberculosis Transports with Mailers

_____ Ova & Parasite Transports

_____ Streptococcus Screening Kits

_____ Capillary Blood Lead Collection Kits

_____ Venous Blood Lead Collection Kits
☐ Vacutainer ☐ Syringe/Needle

_____ Cary-Blair Transport Medium (for stools and bacteriology cultures)

_____ Microtest Transport Medium (for viral and chlamydia isolation)

_____ Pertussis Transport Medium

_____ Polyester Flexible Wire Swabs for Nasopharyngeal Collection

_____ White Specimen Mailing Tubes

_____ Mailing Labels _____ Specimen Bags

Forms

Account Number: _____

_____ Standard Laboratory Requisition Forms (blue)

_____ Chlamydia / GC Request Forms (green)

_____ Neonatal Screening Forms _____ Envelopes

_____ Premarital Certificates

Many of these
supplies are available
on an automatic
monthly shipping
schedule.

**For details,
contact the
Laboratory at
1-800-821-7284**

Please Note: These supplies are the property of the State of Montana and are to be used
only for business with the Montana Department of Public Health and Human Services.

Lyme Disease Report Form

Packaging and Shipping Guidelines

It is the responsibility of the facility to ensure proper packaging and shipping of all potentially infectious and biological substances. Listed below are some general guidelines and links to websites that will provide more detailed information.

Category A

“Infectious Substance Affecting Humans UN2814”

Category A: “An infectious substance in a form capable of causing permanent disability or life-threatening or fatal disease in otherwise healthy humans or animals when exposure occurs by release outside of its protective packaging, resulting in physical contact with humans or animals” (ie, high infective dose possible if exposure occurs)

Category B

Biological Substance UN 3373”

Category B: “An infectious substance NOT in a form generally capable of causing permanent disability or life-threatening or fatal disease in otherwise healthy humans or animals when exposure to it occurs. This includes Category B infectious substances transported for diagnostic or investigational purposes.”

Non-Infectious Substances Exempt Human Specimens

Exempt Human Specimen label indicates there is no infectious substance in the package.

Examples of Exempt human specimens include fecal occult blood and dried blood spots.

Professional judgement must be used to determine transport by Category B or Exempt status.

For more information please visit the following sites:

http://www.who.int/csr/resources/publications/biosafety/WHO_CDS_EPR_2007_2cc.pdf

http://www.iata.org/whatwedo/cargo/dangerous_goods/